

The National Locksmith®



KNOCK, KNOCK...

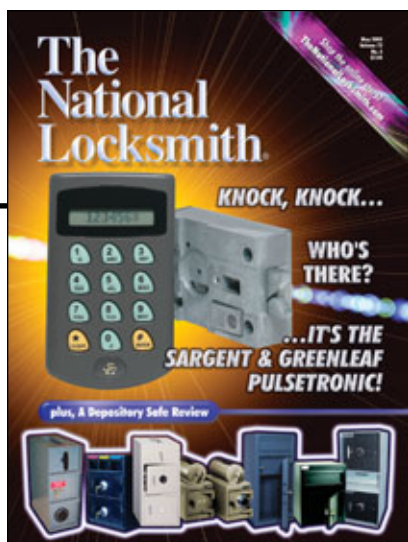
**WHO'S
THERE?**

**...IT'S THE
SARGENT & GREENLEAF
PULSETRONIC!**

plus, A Depository Safe Review



On The Cover...



Profiling Sargent and Greenleaf's new electronic safe lock, featuring a new technology that eliminates attached dials or keypads, and depository safes.

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The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$46.00 per year in the USA; \$58.00 per year in Canada; \$72.00 in all other countries. Single copies \$7.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. ©2002 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



The
Audit
Bureau
Member



**BPA International Membership
Applied for August 2001**

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plus visit our sponsors.*

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COMMENTARY



Cool, Cheap Marketing Tricks 101: The Business Card Club!

Do you want to know the easiest, least expensive way I can think of for you to build more clients for your business?

I won't beat around the bush here. It's the simple business card.

That's right, the business card. Sure, your yellow pages ad, your newspaper ad, your coupons, etc. may produce for you. But there is a cost associated with those that you just don't face with that simple little rectangle of stiff paper.

The best thing you can do to build business right now is to form a Business Card Club with a few of your local business, and this will work for you whether you're mobile or shop based.

You need to partner up with about five or six local businesses other than locksmiths. A local dry cleaner, plumber, tile & carpet installer, florist, real estate agent, insurance agent; all of these guys are perfect candidates. Visit each one of them in person. Tell them you want to invite them to join your Business Card Club.

Each of you prints six thousand extra business cards, and you give a box of one thousand to each member. Every time you send out an invoice or notice, you simply toss the other members cards in with your mailing. And when you do a job you can leave the other guys' cards at the location before you leave. If you have a retail location, place a stack of each member's cards on the counter and they do the same.

Most people don't bother to print on the back side of their business card. But for the Business Card Club I recommend that you print a coupon offering on the back of yours. You can make it something simple such as valid for one free duplicate single sided key (or also worth a discount on a double sided key). Your fellow club members can do the same on the back of their cards. The plumber can print a \$5.00 service charge discount on his, the florist a free carnation, etc.

By doing so, you'll all be able to track the success of your Business Card Club. And the best part of all this is that the entire program is virtually free.

To help you along with this idea, I've found a great web site for inexpensively and easily designing and ordering your own cards online. In moments you can design and order cards, double sided cards, and even in full color for really cheap prices! I've used this site and you'll be surprised how easy this is. Check out VistaPrint.com. (Samples shown are easy templates from that site. Printing on the back side only costs an additional \$4.99.)

Or better yet, invite your local quick printer in on your Business Card Club. Each club member can offer a permanent 25% discount on labor to each fellow member. You'll never find a cheaper, easier marketing plan!

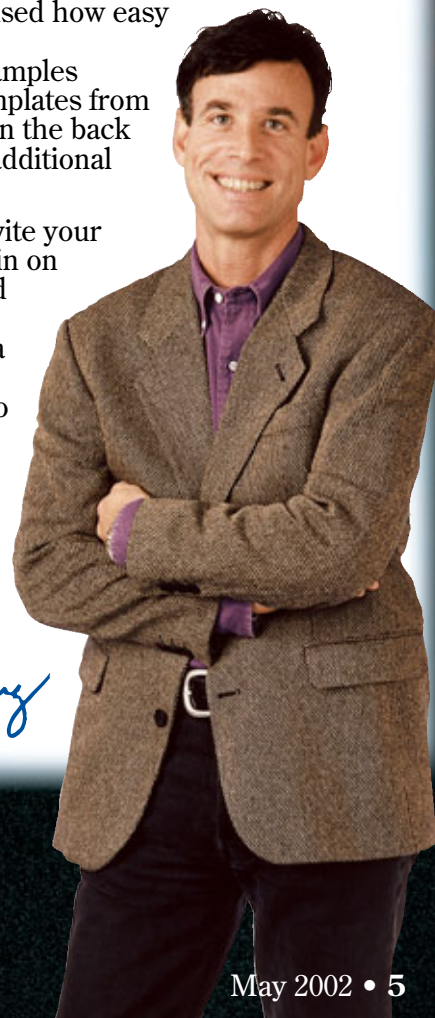


Marc Goldberg

**Have questions? Want free technical help?
Free Locksmith Forums!**

www.TheNationalLocksmith.com

Marc Goldberg
Publisher



Mango's Message

Have you received the following renewal notice?

• RENEWAL FILING NOTICE • APLICAR PARA NOMBRE DE NEGOTIO FICTICIO •
YOUR FICTITIOUS BUSINESS NAME STATEMENT IS GOING TO STOP!

DON'T FORGET! YOUR BUSINESS NAME FILING IS GOOD FOR 5 YEARS IN LOS ANGELES COUNTY.
- By state law you must renew your business name every five years. If you do not renew your name on time it will stop (expire). Someone else may take your business name if you do not renew it on time.

OUR LEGAL DESK™ WILL REFILE AND PUBLISH YOUR BUSINESS NAME ON TIME FOR YOU IN LOS ANGELES COUNTY.
FEE (mail two checks with this form):
NO CHANGES - Pay \$47 Legal Desk AAD NEWS and \$10 LA COUNTY CLERK - Includes: mailed reminder notice, typed current form, hand-carried refiling, new file number, conformed/certified copy of filing mailed next business day after received from Registrar/Recorder County Clerk, microfilm/digitize recording, original return.
CHANGES ON ANY LINE/FIRST FILE/NEW FILE/EXPIRED FILE - Pay \$79 Legal Desk AAD NEWS and \$10-LA COUNTY CLERK - Includes: mailed reminder notice, typed-current form, hand-carried refiling, new file number, conformed/certified copy of the filing mailed next business day after received from Registrar/Recorder County Clerk, microfilm/ digitize recording, original return, 4 successive weeks of publication in adjudicated newspaper, affidavit of publication recorded with Registrar/Recorder County Clerk/ return to you.

*Add LA CLERK check: \$2 per extra business name 2-2.5 hrs. and \$2 per extra registration 48, 48 hrs. See front side of this form 7-2 and 48.

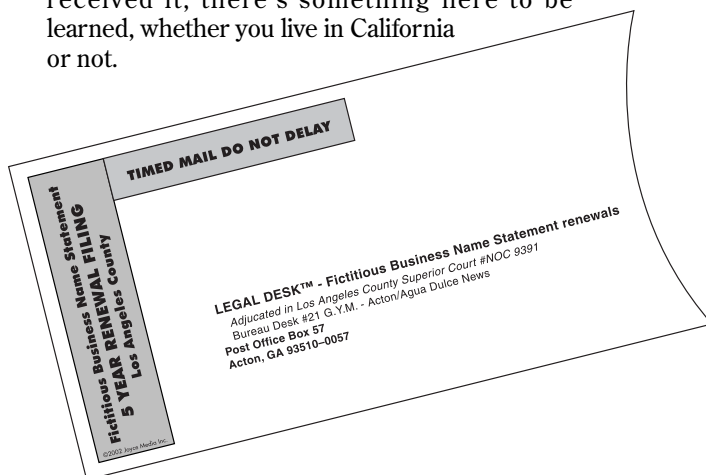
COMPLETE form - SIGN form - MAIL BACK original form with 2 CHECKS in envelope.

If you live outside the state of California, you may not have received this exact renewal notice, but you may receive something similar.

For those unaware, some states and counties (California and Los Angeles County for example) require that you periodically renew your business name to retain ownership. Failure to do so can result in the loss of the business name, and someone else is free to register the same business name under new ownership, and can legally prevent you from using it.

Take a close look at the document. Is it really a legal document, or is it from a for-profit company which is charging you a fee for something you could do on your own for next to nothing?

If you have received the previous renewal notice, there are a few things you need to be aware of before signing on the dotted lines and sending off your money. If you haven't received it, there's something here to be learned, whether you live in California or not.



Fictitious Business Names

Business Name Certificate:

In most states, prior to opening a business, a business name must be selected that is not already in use and then registered with the state or county for a fee. In California for example, the fee to register what they refer to as a "Fictitious Business Name" is \$10 for the first name and \$2 for additional Fictitious Business Names filed.

In my home state of Illinois, The State of Illinois Cook County Clerk's Office refers to business name registration as the "Assumed Business Name" which cost \$5.00 to register and \$2 per additional location is charged.

Publishing a Business Name:

California State law requires that within 30 days the registrant must publish a business name statement in a newspaper of general circulation in the county in which the principal place of business is located.

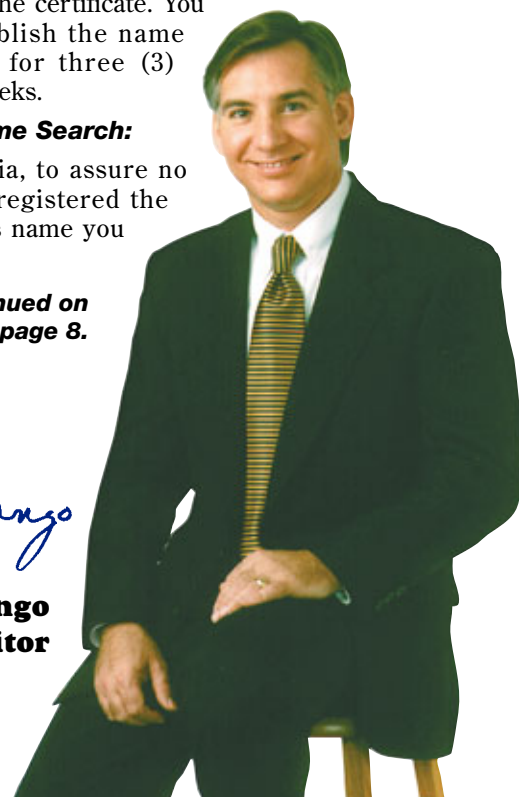
In Illinois the first publication of the business name must be made within 15 calendar days of filing the certificate. You must also publish the name once a week for three (3) consecutive weeks.

Business Name Search:

In California, to assure no one else has registered the same business name you

Continued on
page 8.

Greg Mango
Editor





Continued from page 6

plan to use, a business name search should be conducted. Illinois does not require a search.

Business Name Expiration:

In California a Fictitious Business Name expires five (5) years from the date it is filed. A new fictitious business name statement must be filed prior to that date if you intend to continue doing business under that name.

Illinois does not require a periodical renewal certificate unless there is a change in information, such as ownership, location, name, etc.

Legal Desk™ AAD News:

As you can see, there are some similarities, as well as some differences, in business name registration between the two states, however, both require a business name certificate. Those are the basic requirements (many of which apply in your home state or county as well,) so what's the hitch with the previous renewal notice from Legal Desk™ AAD News?

First of all, it is not an official government affiliated

Do It Yourself:

First off, the Legal Desk™ AAD News is charging a \$10 renewal fee (the standard LA County fee) plus what amounts to a \$47 service fee. You can renew yourself for \$10 in person, by mail or online. If there are any changes to the renewal form the Legal Desk™ AAD News charges the \$10 renewal fee plus a \$79 service fee. If you do it yourself, it's \$10.

Find out business names already used in LA County - updated daily

Call 1 900 505 7171 - Live Operator fax 661 269 2139

Need new form? Need help? New business name OK to use?

Forgot expire date? Lost original filing?

(average call lasts only 2/3 mins. \$5 first min - extra min \$2)

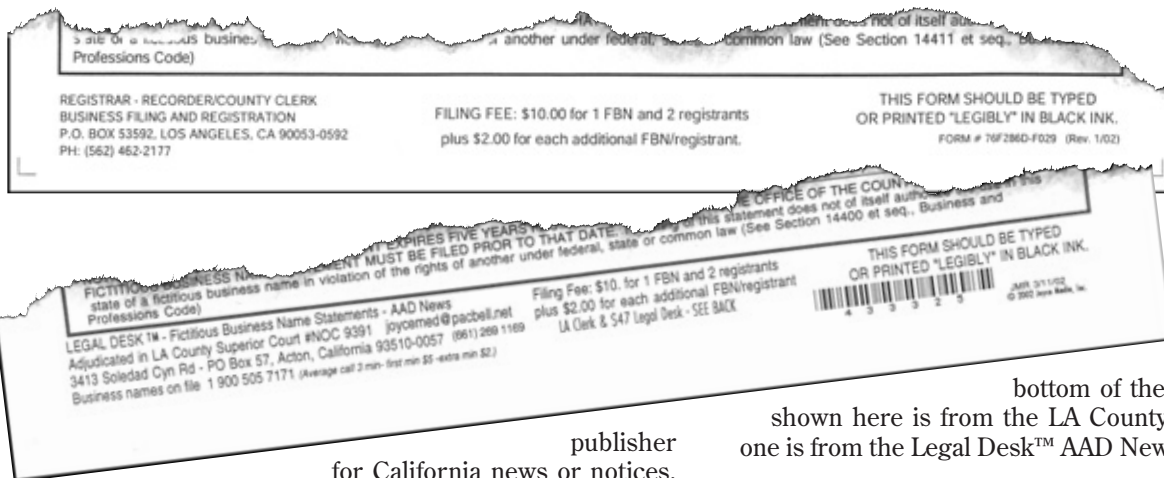
If you do a name search through the Legal Desk™ AAD News, the fine print informs you that the first minute is \$5 and each minute thereafter is \$2, and it is a 900 number. You can do it yourself by mail or online through the County of Los Angeles Registrar-Recorder/County Clerk home page at: (<http://www.lavote.net/clerk/naming.htm>) for free.

The Fictitious Business Name application form used by the Legal Desk™ AAD News is identical to the one supplied by the County Clerk of Los Angeles, except for the print at the very

bottom of the form. The top one shown here is from the LA County Clerk, the bottom one is from the Legal Desk™ AAD News.

To the initially unsuspecting, after closer examination, there are obviously a number of red flags with the material received that should persuade you to examine the situation a little closer, and not take it for face value. There are a number of small publishing companies like the Legal Desk™ AAD News, that veil themselves as an affiliated governmental service agency, displaying official looking seals, names and forms. If you receive any such information, (especially if there are any fees involved, which there always are) inspect it carefully and with an eye of suspicion. The Legal Desk™ AAD News will file your Fictitious Business Name Statement; it is not a scam. However, for the same \$57 investment you can get almost 30 years of business name ownership as opposed to 5.

I believe it's the Home Depot motto that says, "Do it yourself and save." And I believe it was Little Red Riding Hood who said, "Look out for a wolf in grandma's clothing!" **TNL**



publisher for California news or notices.

It is a for-profit independent business providing a service. Even though it is not affiliated with any governmental agencies, when you look at the envelope and contents, it is presented as official literature from the state or county, giving the impression that the filing form and corresponding fees apply.

The Legal Desk™ AAD News is a newspaper of general circulation in the State of California that publishes legal notices, including: Fictitious Business Name Statements; Abandonment Fictitious Business Names; Withdrawal Fictitious Business Names; Dissolution Joint Ventures; Withdrawal from Partnerships; Dissolution from Partnerships; Trustee Sales; Lien Sale Notices; Tax Default Notices and State Tax Lien notices. It is a legit business that charges you a fee for the privilege of renewing a Fictitious Business Name, that you can do yourself for considerably less.

May 2002

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

I Totally Agree

Raymond's letter about *The National Locksmith* in the March issue was right on the mark

The National locksmith is the best publication in existence. The only thing I find wrong with it is, I don't get one every week! I have subscribed to all available locksmithing publications for the last 40 years, and *The National Locksmith* is by far the best. Just don't tell Marc, Greg and big Jake that. It'll go right to their heads.

Ben Marshall
E-mail

You Tell'em Greg!

Mango's Message in the February issue of *The National Locksmith* regarding "Door Doctor," was a good one. That type of editorial helps us all. Great job Greg.

George Henderson
E-mail

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

Mango's DOOR DOCTOR

I just read Mango's Door Doctor editorial with much interest. I did a job at our local KB Toys store in December for a company called *Security Sources, Inc.* out of Peabody, MA. On the phone they agreed to pay within 30 days. It is now well over 60 days and no pay. Does anyone have information on this company? Are they another rip off or can I expect to eventually get my money?

Fred McGuire
E-mail: FredCML@aol.com

Dealing with Service Contractors

Greg, I read with interest your story about Door Doctor. I would like to share with you how I handled a company of this caliber after the first encounter.

Our stories are similar; work is ordered, completed quickly and on time, and payment is very slow, or in my case, received only after sharp words and bad feelings. I'll refer to them as the XYZ Co.

After this service contractor called and had agreed to our hourly rate, the work was done. XYZ Co. then had the gall to deny that we ever spoke about our rates. They then, incredibly, dictated what they would pay with the implication that they wouldn't pay unless we agreed to their terms. There was no way that I could convince, or persuade them that we had to have discussed our rates or we wouldn't have agreed to do the work. We finally settled at a price neither of us was happy with.

I decided that I had to get control the next time they called, and keep



it. The next call wasn't long in coming. After getting all the job information, I told the caller that I would need a credit card number BEFORE I began the work. There was a moment's silence and then the caller said, "What?" I then explained that we would not be put in the middle like the last time with them dictating to me what they were going to pay. This is our company and we set the charges, and we're going to put those charges on a credit card before we begin. When finished, we will bill accordingly, and fax or mail a store signed invoice along with your copy of the card printout.

XYZ Co. was infuriated and began screaming. I hung up.

About an hour later the manager of the store in question called with a request to do the same work. I asked if he had been called by the XYZ Co. and he said yes. I then gave the manager a brief, but detailed history of our first encounter with those people, and why we would not do any work for them except on our terms. I then explained that we would do the work he needed, however, he

would not be able to charge it, and we would have to be paid upon completion. This he agreed to do. (This was done to prevent the bill from being sent to the XYZ Co., and that we were serious about payment). It would also put the store managers in a position of uncertainty about having any work performed if there was bad blood between the dispatcher and locksmith.

I also figured the manager might lean on XYZ to clean up its act, or they would find someone else.

I never again heard from the XYZ Co.

*Edward Dec, CRL
E-mail*

Thanks for the Coverage

Sorry I haven't written sooner, but I got my issue late and we have been very busy.

I wanted to say THANK YOU! The response to the Desktop Dispatcher article has been great!

Just to keep you up to speed, we have added some new standard features. Our users can now e-mail the service calls to any e-mail address i.e. cell phones, pagers, P.D.A's, whatever. Also, they can get free maps to any address in the U.S. All they have to do is click a button and the next window that opens, will be the map to the address via mapquest.com.

Thanks again.

*Mark Fleming
The Desktop Dispatcher*

Thanks for the Selection

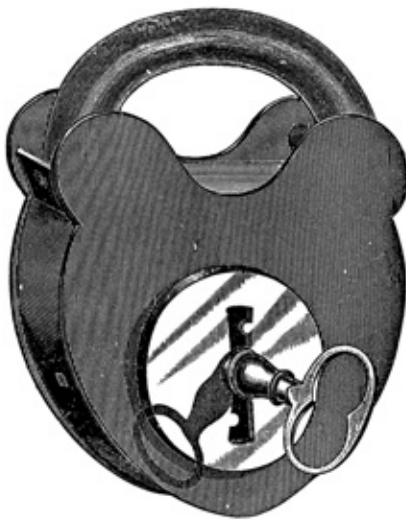
I wish to thank The National Locksmith and Jake Jakubowski for selecting my ideas and tips in the Technitips column. I also want to thank you for the great prizes and tools that you advertise. I sent a letter to High Tech Tools, thanking them for supporting your Technitips column and also for supporting the locksmith with useful information and high quality tools.

Thank you!

*Dennis Harmon
Colorado*

It's a Mallory-Wheeler

In response to Bobby Womble from North Carolina needing help identifying the padlock pictured in the January issue letters section, Thomas F. Hennessy, Curator of the Lock Museum of America, sent the following information.



The lock in question was from The Mallory-Wheeler Company, located in New York City. It is a NO. 1007, 3-1/4 in. padlock. It was available in several sizes: 2-1/2 inches for the 1004, 1005 and 1006; 3-1/4 inches for the 1007; 3 inches for the 1008 and a 4-1/2 inch.

How Wonderful it is to Get a Smile of Appreciation

Reading a recent edition of your magazine, in the letters section "Going Beyond the Call of Duty" brought a smile to my face. How great it is to know that folks still do things out of the kindness of their hearts and not from the, "fat-ness" of their wallets.

My brother and I own Goan Locksmith, we are third generation locksmiths and we are entering our 14th year in business together. We are seeing changes in the locksmith trade that my father and my grandfather never saw. The amount of knowledge and the cost of this knowledge to keep abreast of new and up coming changes of all facets of the locksmith industry, is sometimes mind-boggling!

For all the work there is in keeping a shop open and stocked with supplies, hardware and qualified personal, it can be a major headache at times. So when you do

something for someone and you don't charge, but in return get a genuine thank-you, then you know you have done the right thing. Sometimes a smile or a thank-you is a hundred times more important than money. As the saying goes.... "Do something good for someone and it comes back to you a hundred fold."

Hardly a day goes by without something being done for someone for free, whether it be some information, a helping hand or just helping someone in need. My brother Daniel is as hard a working man as you will find and he has a good heart as well. There were two cases this week alone that I'd like to relay to you.

A woman came into the shop with a briefcase that had a combination lock that was locked. He opened it in just a few seconds and didn't charge her. The next day, the woman came back with a smile and a box of candy to say thank-you.

He then went on an auto lockout to find that this was the third time this woman had called this month! He opened her car and didn't charge her. Two days later, she brought a small plant to the shop, with a thank-you card attached.

How simple it is to do something kind for someone and how wonderful it is to get a smile of appreciation in return.

*Dreux Goan
Goan Locksmith*

Thanks for the Prize

I just wanted to thank you for sending me the "Sieveking GMEZ Wheel Puller" for the idea I submitted to Technitips. While my tip was published in the September, 2001 issue of TNL, I apologize for taking so long to write and say thank you. Things got so crazy around here that I somehow overlooked sending an immediate thank you. So "THANK YOU!"

And might I add, it was kinda neat seeing my name in print again. It's been a long time.

*Allen Mendrin
E-mail*

TNL

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Kaba Ilco Dual Function Key Machine

Kaba Ilco Corp. announces the release of a new key machine, specifically designed for code cutting automotive keys. The 029A is a dual function machine capable of duplicating or cutting a key by code number. An application booklet, supplied with each machine, identifies the specific accessories required for



various auto lock code applications. Other features include: special four-way vise jaws, to insure a firm grip on virtually any popular automotive key blank and wide spacing between jaws to accommodate new, longer key types.

PRO-LOK 2002 Car Opening Update

The PRO-LOK 2002 Update covers the latest foreign and domestic vehicles on the road. Each page is devoted to one vehicle and contains complete information on the tool and technique required to open the vehicle, including photos. The first photo will identify the vehicle, the second photo will show the position of the tool on the vehicle and the third photo will show the actual opening procedure.



The written instructions are easy to follow, and when applicable, an alternate opening method will be shown, with one photo and written instructions, on the same page as the preferred entry method. Each method is field tested by our own technicians. Every major model is included. Vehicles are cross-referenced by model and by manufacturer for easy look-up.

Decorator Door Plates

Decorator doorplates from Carlson's Lock Service are made from



The CyberKey Validator

Videx has introduced a communication station that programs electronic keys, with access privileges, at a remote location. With the CyberKey Remote Validator, users can now receive entry authorization each day, at the exterior of a building or complex, by inserting their key into the communication station.



With the ability to authorize keys on an as-needed basis, Remote Validator eliminates problems associated with lost keys and unauthorized entry. Plus, the system eliminates wrongful entry by someone using a key outside of an assigned work schedule, and prevents key duplication.

Remote Validator is part of the CyberLock access control system. With the CyberLock system, each user key carries a schedule of what locks the key is authorized to open, at what times and days, and the length of time the key is valid. Each time the key contacts a lock, a record is made of the date and time of the contact and whether access was permitted or denied.

polished brass with a lacquer finish for a lasting shine. The units are designed for both 1-3/4-inch and 1-3/8-inch doors, with a 2-3/8-inch backset. The flat edge makes for easy installation and is perfect for retrofits on elegant, costly doors.

Kaiser Marketing System

Kaiser Marketing System increases profits and clientele base. Marketing and locksmithing are like a solid marriage; they go hand in hand. Kaiser Marketing System teaches businesses how to dramatically, and very quickly, improve their businesses and create a constant predictable stream of new customers. Kaiser Marketing System has



designed a system exclusively for the locksmith business. All compiled in one easy to use, step-by-step, marketing success system.

Here are just a few of the benefits this system offers:

- How to increase your profits on every job.
- How to stop wasting money on ads that don't work.
- How to double the response to your yellow pages ad without getting a bigger ad.
- How to get customers to refer you!
- How to get other businesses to get new customers for you-for free.

Key-Bak Spinner

The Spinner from Key-
Continued on page 16

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SECURITY CAFÉ



Bak, maintains the classic circular shape of other key holders in the line, while eliminating any chain or cable abrasions. It can be extended at any angle, a full 360-degree selection, with virtually no wear on the chain or cable. The Spinner can be completely removed from its base and used as a simple key holder, allowing it to be used for automotive keys or in any situation where keys need to be passed from one individual to another.

Securitron Self-Contained Keypad

The DK-11 is a one-piece unit, furnished on a stainless steel single gang plate, which can release any type of electric strike or electric lock for controlled entry. The DK-11 supports four user codes of 2-7 digits in length and a program code, which allows quick code change from the keypad. The DK-11 retains code memory in a power failure without the use of batteries.



When the user enters a correct code, a Five-Amp relay switches, to release the lock for 1-99 seconds. The DK-11 also includes remote input terminals for connection to an exit button. The unit is mainly intended for indoor use, but an optional rain cover allows successful operation in partially sheltered exterior locations.

Marks USA

Marks USA has developed a new access control product, incorporating a request to exit switch, in our Grade 1 Survivor Series Cylindrical Lockset, in both Electrified and Storeroom Function.



Activating the inside lever for egress, activates the built in REX output, providing a momentary signal for the access control REX input, for alarm shunt during egress.

SARGuard Coating

Sargent has joined with AgION Technologies to offer SARGuard.

Sargent will offer its hardware line,



powder-coated with the AgION anti-microbial silver compound, which suppresses the growth of damaging bacteria. This coating will assist anywhere there is a need for a clean environment and a concern against the growth of bacteria and other microbes, such as in schools, hospital rooms, operating rooms, laboratories, assisted living facilities, etc.

6-In-1 Screwdriver/Magnet

The unique patented design of this new tool, allows dropped fasteners to be rescued from even the most difficult spots. It telescopes to 23 inches and the magnet is capable



of lifting over 1/2 pound. The rubberized Quadra Drive® handle delivers up to four times the torque of conventional drivers. The tool comes complete with a removable bit organizer and includes six 1" bits.

Two-Wire Multi-Unit Audio System

Aiphone Corporation's new GF two-wire audio entry security system, is the ideal communication solution for new and existing multi-family/apartment applications. It features an easy 2-conductor common wire connection to all room stations throughout the system.

The entrance station has a maximum capacity

of 5 entrances, calling to 100 apartments or offices. The fully modular flush mount entrance panels are made of vandal proof zinc die-cast aluminum, with an individual call button and directory for each tenant.

The apartment handset is a compact design for easy wall mounting and comes equipped with buttons for door release, external light control, and automatic entry. The system is also equipped with a door release timer, convenient for letting in postal or delivery workers.

Tuffjamb Security Plate

Improving home security can be as simple as installing a Tuffjamb security plate onto your doorjamb. Tuffjamb spreads the force of a blow from an attempted kick in, away from the deadbolt area, with its unique flange that wraps around 16



inches of the doorjamb. Tuffjamb is easily installed – hidden from view – between the trimmer stud and doorjamb. Tuffjamb can be installed on a new, existing or previously kicked in door. You can have easy 18 gauge steel security, simply by turning your deadbolt. **TNL**

SARGENT & GREENLEAF



Pulsetronic™

THE NEW "WIRELESS" ELECTRONIC SAFE LOCK

by Tom Leppert

In a world where technology is advancing rapidly, crime is on the rise and the population continues to grow, we in the security industry recognize the need to continually seek reliable, innovative security solutions. Through expanding technology, we are now realizing the

advantages of wireless entry, programmable codes and portable access. But just imagine the advantages of a solid safe door or container face – with no holes to accommodate a traditional dial spindle or keypad wire –

Continued on page 22



Continued from page 18

and no place to attack the safe's lock. An ideal security solution for a number of applications, particularly home safes, gun safes and in-room hotel safes, the new Sargent and Greenleaf Pulsetronic, utilizes a new patented technology to make invisible, wireless access a reality. (See *photograph 1.*)

The Pulsetronic Safe Lock represents a revolutionary leap forward in personal and business security from the world's largest manufacturer of safe locks. Building on more than a century and a half of cutting edge technology and protection, Sargent and Greenleaf's Pulsetronic gives users a decidedly high-tech security advantage through a special new "Knockcode Technology™" that utilizes a portable keypad to emit discreet, audible "pulses" which are recognized and decoded by the lock inside the safe.

The portable keypad, which is about the size of a TV remote control unit, does not have to be permanently attached to the safe door, container, file cabinet or other surface. (See *photograph 2.*) It can actually be stored in another location and used only when the safe is to be opened, unlike traditional electronic lock keypads. And it's easy to use – just enter the simple six-digit PIN

code, place the keypad on the door (its built-in magnets firmly retain it), push "enter" and the LCD display indicates when to turn the handle. It's also great for that low safe, hidden back in a closet.

No more bending and stooping with a flashlight to dial a combination. You input your code in the keypad in the palm of your hand, attach it to the safe door, push "enter" and you're quickly in your safe.

The Pulsetronic requires neither a hole in the safe door nor direct contact between the portable keypad and the lock mechanism. (However, contact must be maintained between the keypad and safe door while the audible code is being sent). The lock is safely "hidden" inside the door. Since there is no way to tell where the lock is located inside the door, it practically eliminates attack on the lock from the outside. Would-be burglars are unable to detect where the lock is located or how to attack it, making the Pulsetronic not only secure, but virtually tamper-proof.

By now, you are asking yourself, "What keeps an unsavory character from recording the audible pulses and playing them back to open the safe?" First of all, the keypad and lock are synchronized when installed or if a keypad is replaced. The user selects a 6-digit PIN code that can be easily changed, which is the code that opens the



2. The portable keypad.



3. The standard square bolt configuration and the new Rotarybolt™ split-bolt design locks.

lock/safe. Second, when the PIN code is entered, the keypad then sends encrypted, audible pulses to the lock. Third, after each lock opening, an algorithm changes the internal code of the pulses for the next opening. This change is not noticeable to users as the user PIN code remains the same, but the audible pulse code to the lock is ever changing. In reality, the pulses or taps emitted from the keypad will sound identical, but the technology in the lock differentiates time intervals in between the pulses to determine if it is the correct code.

The keypad's easy-to-read LCD display makes using and programming the Pulsetronic as easy as following a few simple prompts. For added flexibility, prompts and instructions are available in the English, German, Spanish and French languages. The locks mechanisms, themselves, are available in two versions. The standard square bolt configuration and Sargent and Greenleaf's new Rotarybolt™ split-bolt design, both of which can be applied to varying safe bolt work designs with ease. (See photograph 3.)

Another distinct advantage of the Pulsetronic is its "tamper delay feature" that is designed to detect tampering or random attempts at access. Rather than allow a burglar to continue multiple attempts to gain access, the keypad automatically activates the tamper delay after 25 code inputs within a 15 minute time period – long enough to deter any burglar.

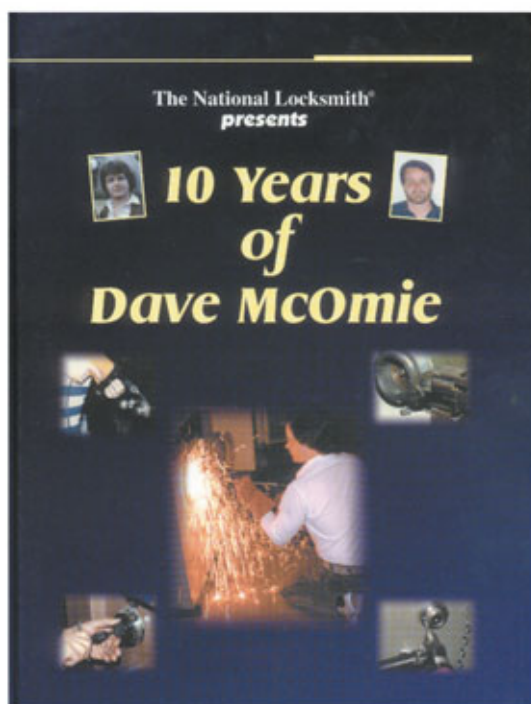
For added security, in just a few quick steps, users can change their PIN codes periodically. Codes may contain any combination of digits or letters. The Pulsetronic design enhances security. For example, if

the user pauses for more than 10 seconds during the code-entry procedure, the system resets itself. The easy to read LCD prompts you through changes. Plus, if a user wishes to secure multiple safes or containers, a single Pulsetronic keypad can be programmed to control up to nine different locks.

In addition to the Pulsetronic's unique design and impressive list of features, its affordability makes the Pulsetronic attractive to homeowners and businesses alike. As one of the world's oldest and most respected producers of high quality locks and related products, Sargent and Greenleaf ensures that its customers can also count on top-notch durability, dependability and support. Sargent and Greenleaf products have protected the assets of banks, businesses, governments and individuals all over the world since 1857. And like other Sargent and Greenleaf products, the Pulsetronic is designed to meet the highest quality and manufacturing standards in the world, including ISO 9002, U.L. and other worldwide certifications.

Thanks to its unique combination of security, flexibility, simplicity and reliability, the Sargent and Greenleaf Pulsetronic is the ultimate safe lock for small-to-medium-size applications. And because of its innovative tamper-resistant design, it's poised to rapidly become the ideal option for hotel, business and homeowners who need high-end security at an affordable price.

To find out more about the Sargent and Greenleaf Pulsetronic "invisible" and wireless safe lock, call the company's headquarters at 1-800-826-7652 or check them out on their web page at: www.sargentandgreenleaf.com. Circle 276 on Rapid Reply. **TNL**



10 Years of Dave McOmie

Every single National Locksmith article by Dave McOmie from August 1986 through August 1996 under one cover!

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DEPOSITORY SAFES

The ABC's of Depository Safes

A&B Safe



Almost every manufacturer offers depository safes as part of their product line. So how do you select the right safes for your showroom? How should depository safes be used and where?

Most dealers know what makes a depository safe the product they feel comfortable recommending and selling to their customers, but for those who are new to the industry, this is what to look for.

First and foremost, look at the construction features of the safes you are thinking of representing. Remember that your reputation is closely linked with the products you sell. Look for a safe that is constructed to the full "B" rate construction specification. This spec is a solid steel construction of 1/4" body and 1/2" door thickness. Bolt work varies with each manufacturer, so look for bolt work that is strong and effective, and bolt work that has relocking devices for protection against forced entry. Don't let price be your only consideration when looking for a safe line. Quality is really remembered long after price is forgotten.

Look for a manufacturer that provides a full range of different models, because your customers do not all have the same requirements. Each customer has different needs. There are different sizes of safes with slots or depository hoppers of various sizes. Hoppers, such as A & B Safe's AB3M, come in various sizes to accommodate many sizes of deposits, and the hoppers can be either top load, front load or rear load.

Locking devices to fill the requirements of each user: dual key locks for dual control of the security container, mechanical combination locks and electronic combination locks, which offer many programmable operating options.

The "B" rate depository safe should be recommended for the temporary storage of cash, such as driver deposits on the route truck and under-counter cash register stripper safes. The idea is to limit your customer's exposure to the possibility of losses due to hold-ups, in-house loss due to employee theft, and of course, your customer's responsibility to his employees to provide a safe environment for handling cash.

Last but not least, is the proper installation of the depository safe. Because of the weight of the safe and the very nature of a depository safe; they must be bolted

down. Instruct the user of the safe to be aware of the danger to hands and to only turn the hopper in a slow and deliberate manner. Deposits drop best when the deposit is free to move in the hopper and when the hopper is turned slowly. The operator should also check the hopper after every deposit to make sure that it did in fact drop. Following this information will save you a lot of problems that may arise after the sale.

Adesco Rotary Deposit

The RD2008KC rotary deposit safe was designed specifically for the small business with space limitations.



Continued from page 26

This double-door, B-rated safe, has outside dimensions of 20-1/2" H x 8" W x 15" D. The top door receives money, dropped into the rotary hopper, and is secured with a dual key lock. The bottom is secured with a group 2 combination lock, and is equipped with bolt holes for anchoring. The rotary hopper accepts packages up to 2-1/4" x 4-1/4" x 10" in size.

AMSEC DS Series Depositories

Sadly, in today's market, businesses are more likely to be victims of employee theft, than burglary or robbery, losing up to 20% of company profits. Many, however, have faced the challenge of reducing employee theft by eliminating the opportunity before it happens, with an effective cash management system.

American Security Products has the widest range of depository safes offered in the industry, with a standard design that will meet the needs of most businesses.



DS Series – The AMSEC DS Series depository safes are designed to provide immediate deposits and secure storage for cash, jewelry, and misc. valuables. Deposits can be made through a locked door via a top-loading rotary hopper, a reverse hopper, or a front-loading deposit door, offering instant protection from hold-up or burglary.

These types of depository safes are recommended for any operation that requires a non-returnable deposit, such as armored car companies, convenience stores, restaurants, etc.

MM Series – Also recommended for operations that require non-returnable deposits, is AMSEC's "B" Rate Money Manager Series. The MM2820 Series is the most effective cash handling system available, engineered to help achieve total cash control. Available as a top drop, center drop, or three-drop model, with individual color-coded 4" drops for shift control.

Both doors of the MM2820 are equipped with high security combination locks and key locks, offering dual control. Coin racks are standard on the inside of the storage door. Fish resistant depository drops accepts bulk items, such as drop envelopes or bags.

BWB Series – Extensive research and development went into the engineering of AMSEC's wide body, "B" Rate cash handling depository safes. The BWB Series are designed to offer complete cash management versatility, with a wide selection of depository options, such as a top, front or rear load depository, one to three deposit slots, or a pull out deposit drawer.

Each unit comes equipped with an interior locker to accommodate deposits, a large interior for storage of cash trays, and a door mounted, recessed coin rack.

Any standard AMSEC safe design can be modified to meet the specific-security needs of any business. They have designed safes with features such as anti-theft hoppers, to prevent employees from "fishing" for currency, to double-lock interior drawers with access for armed guard only. Detailed drawings of the safe with a quote for construction can be provided to meet every cash management any business may require.

In addition to safe design and construction, AMSEC is also a leader in the development and implementation of electronic locks, made especially for depository safes, with integrated features such as time delay, distress codes, multi-user codes, audit trail, alarm system interface, etc. Offering both third party and our own proprietary control systems.

Whatever your business, AMSEC can work with you to create a security solution that will eliminate the opportunity of employee theft before it happens and increase your profits.

Corporate Safe Specialists
Cash Management

"The Drop" as in the slot, rotary hopper, drawer or mailbox has gone hand in hand with Cash Management for years.

Cash Management is the catch phrase for modern safe selling. Teaching the client where to place the safe and how to use it, is just as important as talking about relockers and hardplate.

The client's cash drop size will determine the type of drop to recommend. Most companies have a policy about cash drawer minimums. Knowing this will help to determine the cash drop size. Actually, seeing the drop is best. Many clients are unsure of this information and usually a quick visit to one of the customer's locations will help you get this information.

With bulky deposits, the modern mailbox or rotary type drop safes are the way to go. If the customer is using the common deposit envelope, the drawer or the slot is best. You can also be helpful by suggesting the drop safe that has separate color-coded drop drawers, such as Corporate Safe's Model CS2820. This safe has the multiple drop feature which reduces the time needed to audit the safe contents. This idea alone can save your client enough time to pay for the safe itself.

Placement of the safe is just as important as drop size. The drop safe location will help to determine its effectiveness. The rule of thumb is that the safe should be as close to the register as possible and visible to the customers. Being close to the cash register will allow the employees to make quick and efficient drops during heavy

Continued on page 30

Continued from page 28



customer traffic times. Having the safe visible will aid in reminding the employees to use it and let “would-be” robbers know that your client has a cash management plan, reducing the possible take.

Besides saving the client money from internal cash losses, some \$14 billion dollars per year, the drop safe is also a proven armed robbery deterrent. When used with a time delay lock and warning stickers, the drop safe helps to reduce the amount of available cash in the cash register. Bad guys want “easy cash,” the cash register is up in front and by the door. It’s function as a cash storage unit is a liability waiting to happen. And unfortunately, it does happen hundreds of times every day. Some 10% of these robberies result in violent injury and even death to some store workers.

It’s a simple combination of knowing your customers cash management program and recommending the right drop safe to fit their specific needs.

If you ask your customers these questions, it will make the difference between them using your drop safe or them going to the local discount retailer or home improvement store and buying the Sentry home safe for their location. Helping the clients reduce loss, handle risk and save lives is our duty and obligation.

Committed safe sales and service people make a difference!

Discount Safe Keep It Safe

Locksmiths can capitalize on depository safe business with customers who have cash handling rooms, with the Keep It Safe line of depository safes from Discount Safe Company. Cash rooms can be found at such businesses as apartment buildings, department stores, casinos, and auto dealerships.

30 • Visit www.TheNationalLocksmith.com



Discount Safe offers a B-rate, front load depository safe for under counter or under desk application. The 12-gauge construction unit, which measures 18” H x 14” W x 12” D, is ideal for such applications. The mailbox styled deposit compartment seals off the inside when receiving the deposit. The self-closing compartment makes it virtually impossible for employees to fake a drop.

The large depository compartment accepts most bank bags, and is equipped with an anti-fish baffle. Deposits can be made without unlocking the door, thus keeping previous deposits secured. This unit is available with three different locking systems: a dual custody safe deposit lock (Model KS-FL-1814-K), a UL listed combination lock (Model KS-FL-1814-C), or an electronic digital keypad (Model KS-FL-1814-C).

The locking options provide a variety of control levels, from single user, to auditing of multiple users. Four mounting holes are pre-drilled on the bottom. One example of how this safe could be used, would be as an evidence drop, in a police department. The pictured locking system for dual operators reduces temptation for internal theft.

Gardall Depository

The Gardall model GWD-3522, is built for today’s ever-increasing security needs of the depository marketplace. It combines the new and improved secure front load design, as well as the time proven security of a Gardall Safe.

The drop can handle envelopes and bags up to 14”x4”x3” in size. Larger bags can be handled with our oversize hopper option.

The front load compartment is completely enclosed and protected against pry attack and unforced entry. The anti-fish baffle and specially



designed chute provide excellent security against illegal retrieval from forcing bags back up the drop compartment.

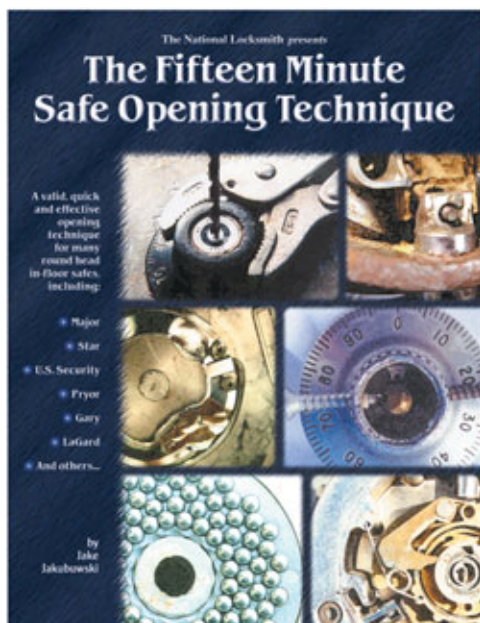
Once inside, the drop can be secured in an isolated compartment. This compartment can be locked by single key, dual key, combination lock, or electronic lock. If desired, this inner compartment can be eliminated for additional storage of drop bags or envelopes. The outside or main door is built of 1/2" steel, reinforced with 3 each, 1" round locking bolts.

Additionally, the door is locked on the hinge side by a full length locking bar, giving continuous pressure along the length of the door. Removal or damage to the hinges will not allow the door to be removed. This main door can be locked with any number of UL listed and approved locking devices. As with all depositories, Gardall Safe recommends that every safe is bolted to the floor and we provide four pre-drilled holes for securing the safe to the floor.

The Hayman "Flexible" D Series

The D-Series of depository safes has all of the features and quality you have come to expect from Hayman Safe Co. The series is available with rotary hopper (D5 series) or front-loading depository (D6 series) and with single or double door configuration. The D6-2M is a double-door safe with the front-loading depository located between the doors, to drop into the lower unit. This design is superior to other double-door models because the manager has easy access to the upper unit, and the lower unit, which contains the day's deposits, is better protected.

Of course the depository can be positioned to deposit into the top compartment if desired (D5-2T or D6-2T).



15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGuard style round head.

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Perma-Vault Depositories

According to Perma-Vault, locksmiths can tap a potentially lucrative market for drop box sales. The units, which are available with many options, including mechanical or electronic locks, as well as high security key locks, are frequently used by apartment complexes for rent drops, hospitals for medication or important document drops, and municipal complexes for utility payments.

The units can be sold in numerous applications where management wants the deposits secured and out of sight, thereby reducing the threat of damage caused by forcible entry at windows or doors, wherever deposits are visibly lying on the floor below a regular mail slot. In each situation, the public can make a deposit outside of normal business hours without business access.

"Our approach to the business is that depository safes, such as our Pro-902-M and Pro-2225, should provide security and protection from the elements, for deposits which are being made when a building or office is unattended," said Bob Johnson, president of Perma-Vault.

According to Johnson, depositories can be installed through a wall, utilizing an adjustable chute. In the case of Perma-Vault, many safes also have an optional cover with an optional lock, which can be placed over the depository chute, allowing access to only certain individuals and thus increasing security. "Limiting exposed deposits helps prevent external loss, internal loss and deposit variance," Johnson said. "The instant you deposit cash, checks, receipts or other important material through the chute, the depository is helping protect against robbery and employee theft."

Benefits a locksmith can sell to his customer, are that drop boxes limit the amount of cash exposed to robbery and the opportunity for employee theft is minimized. In addition, the locksmith can tell his customer that with a drop box in place, employees will be more aware that their cash handling performance is being monitored.

"Cash drop boxes prevent the snatch and grab, which could happen with an open cash drawer, eliminates the 'I gave you a \$20 bill' scam, and minimizes the impact of honest change-making errors. They improve employee morale by demonstrating concern for their welfare and safety," Johnson said. "They also eliminate co-mingling of employees with those who are counting cash," he added.

One item in Perma-Vault's line of depository safes, which addresses this particular concern, is the "Twice As Safe™" unit. It provides the additional protection of a locked cassette, which is removed and taken to the back office.

In addition to cash drop boxes, Perma-Vault also manufactures "B" rate rotary hopper and front deposit safes. The company also manufactures custom products to meet specific needs of customers.

Phoenix Depository Safes

Phoenix Safe International offers two Depository safes designed to protect the collection of money or other goods, where immediate deposit is required, without unlocking the safe or requiring a cashier to hold keys. Both safes have a top-loading rotary hopper that completely seals the safe after the goods or cash have been deposited. The safe body is constructed from 1/4" steel plate and the door is constructed from 1/2" solid steel. The door is reinforced with hardened anti-drill plates over the locking area.

Safes include a Group 2 combination lock and a bolt down kit for extra security. Phoenix model 994 provides a single compartment with 1.09 cu. ft. capacity. Phoenix model 995 provides dual compartments. The upper





compartment offers 2.33 cu. ft of storage space, while the lower compartment offers 2.26 cu. ft. of storage space.

Rolland Safe & Lock ARFE

Rotary hopper depository safes have long been the solution for the user who needs a depository with a generous capacity drop, to accommodate large deposit packages. The “Tambour” front-load rotary hopper depository has been painstakingly engineered with innovations that go far beyond merely meeting design objectives.

The ARFE Front-Load Rotary Hopper is designed and built by international safe manufacturer ARFE (Articulos Ferreteria; translation – “articles of hardware”) of northern Spain, the Tambour offers a unique design and advanced level of security for customers who require a large capacity drop safe. “Tambour” – which translates into “drum” in the English language – explains the nature of this clever design.

One of a few “front-load rotary hopper” production safes made in the world, the Tambour offers the security of a positive drop hopper, with the ability to place it under a counter or shelf. It is currently available in three different sizes: 24 x 15, 28 x 20, and 40 x 20, the largest model.

Traditionally, when a customer desires larger capacity, the rotary hopper offers a high level of anti-fish protection. The typical products that offer the rotary hopper feature, do so by having the drum rotate from the top. This widely accepted design prohibits the safe from being installed in anything but a stand-alone position. In today’s escalating property rental rates, space is especially precious in retail and food service venues. A merchant in this situation would, in most cases, integrate the safe in a cabinet or under a counter. The Tambour offers the right solution.

How does it work?

The Tambour is accessed from a front door or flap that is indistinguishable from the popular “mail chute” designs sold by almost all manufacturers. Under the door, a flap is pulled down, and a timed gear system rotates the drum or hopper into the front forward position. After the items to be dropped are loaded into the chamber, the natural tendency of the flap door is to return to the closed position and facilitate the drop. The gear system is designed to provide years of trouble-free



use, by using a bushing system on each end of the hopper. Should the drum ever need servicing or replacement, four Allen head bolts easily remove the mechanism into the body of the safe. The latest technology in laser cutters allow ARFE the ability to produce the intricate design and function offered in the Tambour, while keeping the retail price in line with the less versatile top-load rotary hopper.

Each safe incorporates a “snap-action” bolt detent that fires when the door is closed. The chrome-plated coin holders offer the industry’s first convertible coin rack system. The model TB2820 and the larger TB4020 are equipped with an interior locker that is normally accessed with a single nose safe deposit style lock. Each unit comes with adjustable shelving.

Wilson Drop Safe System

Wilson Safe Company provides, installs and services asset protection products throughout the United States and Internationally. One of their strongest categories of products has always been depository safes. This area has grown from the basic drop box, to units that operate in such a manner that add both efficiency and security to a client’s business.

One of the products they market is the CashTrak™ Drop Safe System manufactured by Ellenby Technologies.

The CashTrak™ Drop Safe System is made up of four modular component parts and is easy to service. The four parts are the bill, the internal controller, the keypad, and the lock. Printer is optional.



The unit is supplied with a variety of lock choices, from electronic, combination, key, or any combination.

The validator is a Mars Electronics, which is considered the top of the line in the industry. The unit is installed with six screws and two fitted plugs. They sell these units in

three different ways. The first is a unit that utilizes a 1000 bill non-locking removable cassette. The second is with a 1200 bill non-locking removable cassette. The third is with a 1200 bill locking removable cassette.

The 1200 bill locking removable cassette validator is designed for use with multiple systems or utilizing armored car service.

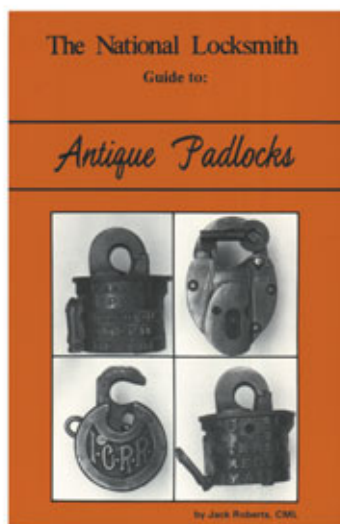
The controller is available with or without a built in secure modem. The modem is used with ETI remote site audit software. The system has a built in serial port to interface with back room computer systems, for greater reporting and archiving capability utilizing ETI backroom software. The client has the option of using software or simply utilizing the optional printer.

The keypad has the ability for User Ids to be tracked by number, name or a combination of both. There are also five hot keys for instant tracking access.

The dimensions of CashTrak™ are: 21.5"H x 6.75"W x 16.375"D. Weight is 55 pounds. Risers are available 8" H standard. Custom sizes available.

Benefits: These units help managers spend less time counting and more time managing. They help add value to your customer's loss prevention plan. Continually audits cashier drops minimizing employee theft (typically \$20.00 dollar bills and larger are validated without going in a draw.) Provides detailed receipts and makes cash deposits ready. Allows user to handle cash once reducing costly mistakes. Logs checks and coin deposits, making all your accounting electronic. Remote site software can interface with a POS system or simply tell a remote office what is in their safe. **TL**

Antique Padlocks

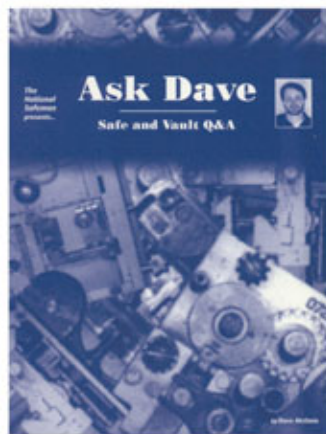


Finally there is a book to give you all the information you need about old interesting locks.

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#PAD - 1

Ask Dave



You asked. He answered. This is safe and vault Q&A with an attitude.

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#AD - 1

ASSA'S



by Sal Dulcamaro, CML

New Auxiliary AND Cabinet Locks

ASSA has recently introduced some new auxiliary and cabinet locks that work in conjunction with the standard full sized ASSA keys. These new products allow full integration between ASSA architectural hardware lock products and other specialty locking devices used on cabinets, drawers, locking compartments and more. With some

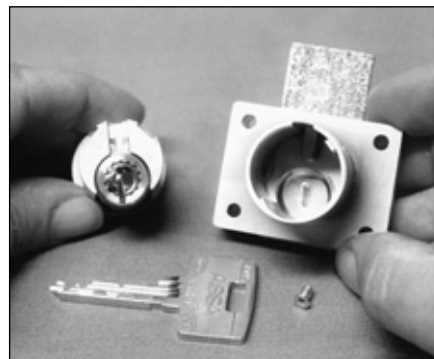
minor exceptions, the new locking devices use full size ASSA high security cylinders.

Photograph 1, shows one version of the cabinet lock. This lock has a vertical locking bolt. It is available in a 626/dull chrome finish (as shown) or in 605/bright brass. One half-turn key rotation will move the bolt from vertical down to vertical up. The extended (locking) end of the bolt does not retract fully into the body of the lock, but protrudes (fully extended) from either side by rotating the key one way or the other.

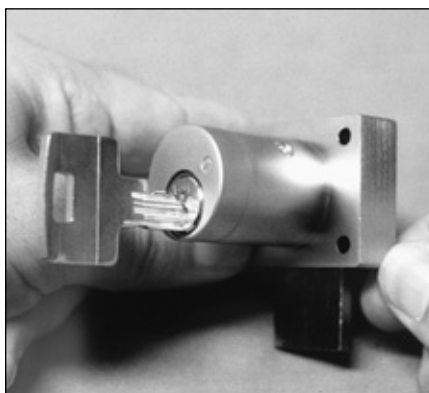
To service or rekey this locking device, you will need to remove the lock cylinder inside it. There is a Phillips head retaining screw at about 2 o'clock, nearly two thirds of the way back from the face end of the tube shaped body. The retaining screw has been removed and the casing that surrounds the lock cylinder has been partially withdrawn from the outer lock body. (See **photograph 2**.) A matching threaded hole can be seen in line with the outside hole where the retaining screw has been removed.

Photograph 3, reveals the open cavity and the slot in the actuating device that is driven by the tailpiece of the lock cylinder. The backside of the inner casing (that surrounds the cylinder) is also seen.

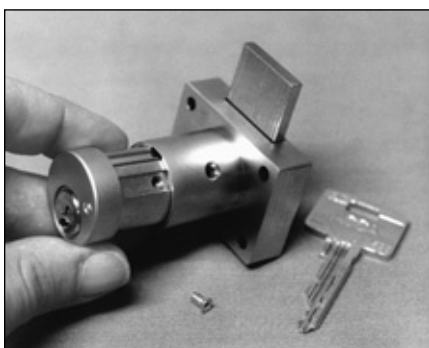
The lock cylinder will easily slip out of the inner casing, as in **photograph 4**. There is no separate retaining screw that holds the cylinder inside that piece. With the cylinder out of the casing, you can see that it is an ordinary Schlage



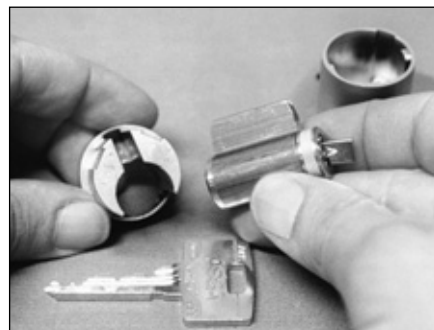
3. The actuating device that is driven by the tailpiece.



1. This lock has a vertical locking bolt.



2. The retaining screw has been removed.



4. The lock cylinder removed.

compatible (key-in-knob or key-in-lever) style ASSA lock cylinder.

A few years ago, I wrote some articles on the internal workings and mechanical operation of ASSA high security locks. I will not go into the specifics of lock cylinder servicing here, as this cylinder is serviced virtually the same as if it came out of some architectural hardware such as a key-in-knob lock. The only real difference is the special tailpiece that adapts it to this cabinet lock. If you

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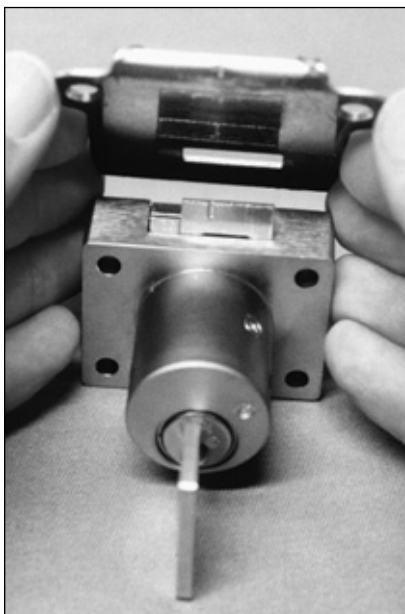
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think it would be worthwhile to see an updated piece on the internal mechanical operation of ASSA high security locks, contact me through my web site address. If enough TNL readers are interested, you will probably see such an article in the near future.

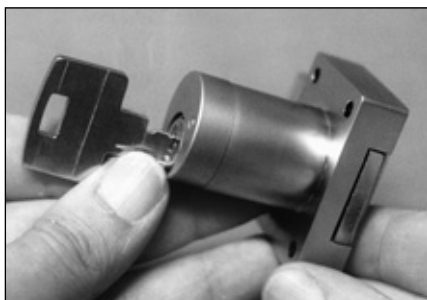
Another version of an ASSA cabinet lock is shown in **photograph 5**. It is nearly the same except for the orientation of the lock cylinder keyway in relation to the direction of the locking bolt. This version has a horizontal bolt that moves from left to right (or vice versa) by a half key rotation one direction or the other. The process of lock cylinder removal and servicing is virtually identical. It is also available in 626 and 605 finishes.

The Dead-Locking Drawer Lock

Photograph 6, shows a rather innovative concept in cabinet locks—a deadlocking springlatch bolt. The concept is more familiar to most of us when used on a regular door lock. It is not typically something you'd find in a cabinet or desk drawer lock.



6. A deadlocking springlatch bolt.



5. Another version of an ASSA cabinet lock.

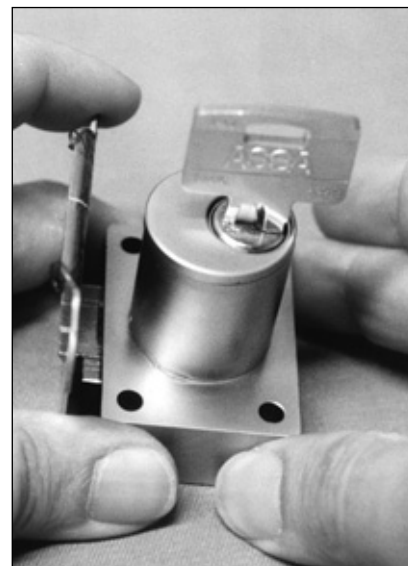
This lock requires a special strike plate to be installed (into the drawer or cabinet frame) to properly activate the deadlocking device. The springlatch portion protrudes while the deadlatch is compressed in **photograph 7**. Except for the bolt/latch, this device is somewhat similar to the vertical and horizontal bolt cabinet locks shown earlier.

The overall body design is nearly the same. Likewise, the same type of lock cylinder is encased inside the body.

The nose end of these locks will fit through a round hole in the cabinet door or drawer where they are installed. Being large format lock cylinders, they will not likely retrofit into an existing standard desk lock mounting hole. You will need a 1-1/8" diameter hole to install these locks. Depending on how thick a surface, you may end up using some of the plastic spacer pieces that are included with the locks. The nose length for the vertical and horizontal bolt locks is 1-3/8". The deadlocking latch lock is available in both a 7/8" and 1-3/8" version. All three lock types are available in both the 626 and 605 lock finishes.

Utility Lock

The utility lock is an interesting lock. It looks somewhat like a cross between a file cabinet lock (but much bigger in size) and a showcase lock. Like the earlier cabinet locks, it uses a full size ASSA key and it is essentially a full size ASSA lock cylinder. The lock is surface mounted, and (as far as I can see) it seems to have a whole lot of possible uses. The lock is assembled into a cast aluminum housing. The housing needs to be installed first. The lock and housing are shown in **photograph 8**. The long round bolt that



7. The deadlatch is compressed.



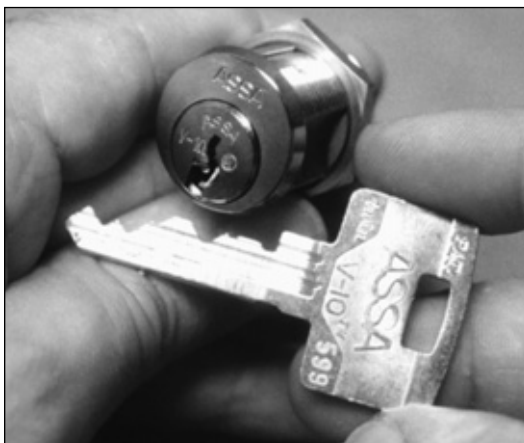
8. The lock and housing.

extends from the back of the lock is a fixed part of the lock body. The narrow spring, just above the round bolt, pushes against the inside surface of the housing.

The three large holes in the side of the housing allow a screwdriver to fasten screws through the smaller holes on the opposite side of the housing. Once attached to a door (or other device surface) the lock can be



9. The utility lock fully locked.



10. An ASSA cam lock.

put into the housing. A spring loaded bolt (that locks the utility lock into the housing) is on the opposite side of the utility lock and not visible in this picture.

If you try to load the utility lock into the aluminum housing before first mounting the housing to a door (or whatever else to which it may be attached), the lock body will block the screw mounting holes and you won't be able to attach it. **Photograph 9**, shows the utility lock fully locked into the housing. The unlocking operation of the key does not move the long round bolt at the tail end of the lock, but instead a shallow spring loaded bolt (on the long side of the lock opposite from view) that locks into a separate hole near the screw holes. The long round bolt (and the rest of the lock body attached to it) is pushed to an unlocked position by the force of the (then compressed) spring just above it. The utility lock does not completely shoot out of the housing, because the loose screw in the previous picture fastened a brass (flanged) bushing to the end of the bolt.

A surface mounted strike (that accepts the round bolt) is just to the left of the lock in the housing. That also has oversized holes on the outside for a screwdriver to fasten screws attaching the strike. Once both pieces are attached, special rectangular cover plates can be glued onto the strike and housing to cover up the large holes. A mortise strike is included along with the cast aluminum rim mounted strike.



11. A slide cover that can be removed.

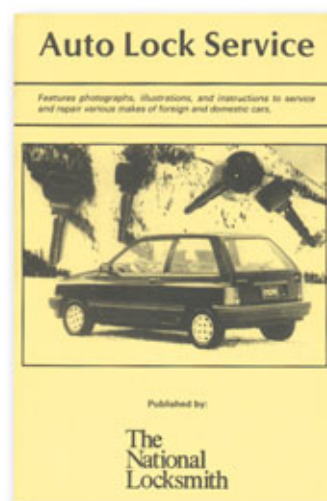
the use of full sized driver (top) pins that are used in most of the architectural hardware lock cylinders. Special partially hollowed top pins, which were introduced with the later version ASSA IC lock cylinders, are needed when coding ASSA cam locks. All the bottom pin lengths are each matched to specific length top pins. Only the #1 size bottom pin and key cut depth are

Cam Locks

The new ASSA cam locks also use a full sized ASSA key. They also use a full sized ASSA cylinder plug. The lock body, though, is considerably smaller. As a consequence, the cam locks differ a bit from the previously mentioned utility and cabinet locks. **Photograph 10**, shows an ASSA cam lock and full sized key. This key happens to be a newer V-10 key, but all the auxiliary and cabinet locks are available in versions compatible with the original Twin 6000, V-10, and the more recent Twin Exclusive keys.

The overall small size of the cam lock (without any reduction in key or cylinder plug size) has the net effect of dramatically reducing the length of the upper pin chambers in the lock cylinder shell. A top view of the cam lock shows a slide cover that can be removed for rekeying an ASSA cam lock. (**See photograph 11.**) The more confined space of the cam lock's upper chamber prevents

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#ALS - 1



12. A full sized ASSA MPK Master Pinning Kit.

retaining version has an extra mechanical device at the back to alter the cam motion related to key rotation.

Figure A, shows how the timing is set for a non key-retaining cam lock, for either right hand or left hand turn. A full 360-degree motion of the key (and plug) causes the cam to only rotate 90 degrees. The additional part takes up extra space at the back end of the cam lock. That makes a non key-retaining cam lock necessarily a bit longer than its key retaining equivalent lock.

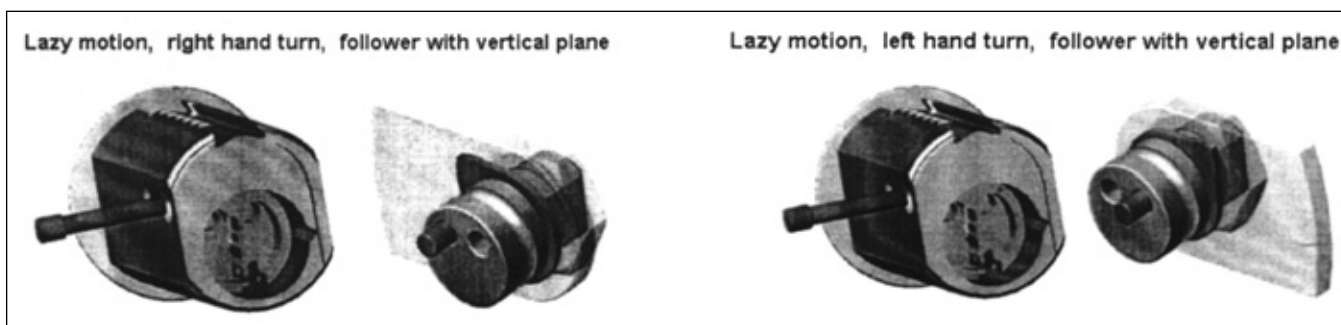
Patents and Key Control

The original ASSA patents just expired in the past couple of years.



13. A Twin Exclusive key.

some, but not all the patented characteristics of the V-10. **Photograph 13**, shows a Twin Exclusive key. The deep angled groove, which is one notable characteristic of V-10, has been introduced as a modification of the original Twin 6000 keys and a matching characteristic into the keyway broaching.



A. How the timing is set.

excluded for use in the cam locks. Absent the use of #1 size pins/cuts, cam locks can be fully integrated into an ASSA master key system or just keyed alike to architectural hardware lock cylinders. For those unfamiliar with ASSA's pin size and key cut numbering system; #1 is the longest pin and deepest cut, and #9 is the shortest pin and shallowest cut depth.

Photograph 12, shows a full sized ASSA MPK Master Pinning Kit. This kit contains all tumbler sizes needed for servicing all ASSA lock cylinders, including ASSA interchangeable core. If you just have the standard servicing kit and want to upgrade to service cam locks, you don't necessarily need this full size kit. ASSA also has a mini kit available with just the extra parts needed for cam locks.

ASSA cam locks are now available in both key retaining and non key-retaining versions. Because a pin tumbler lock needs to return to a 12 o'clock keyway position for key insertion or removal, the non key

Key control is generally related to the existence of an enforceable patent. As far as I know, no after market key blank manufacturer is currently making key blanks to replace the now expired original ASSA patented keys. Even if someone did, the side-milled cuts would require special machinery to duplicate for each ASSA dealer's side code. What that suggests is that your customers who have original ASSA Twin 6000 product, don't have to immediately upgrade to avoid unauthorized key duplication, but it might be a good idea to let them know about the expired patent and give them the option of upgrading if they wish. ASSA's replacement product line with a new patent is the V-10. Any current ASSA Twin 6000 locksmith dealers, who wish to upgrade to V-10, will have to make another buy-in purchase to become V-10 dealers. If you would like to upgrade to current patented ASSA product without that same cost, you might want to consider a new option: ASSA Twin Exclusive. It shares

As far as I have heard, there is no additional dollar amount required as a buy in when upgrading to Twin Exclusive. You will just need to update your dealer contract with ASSA. Obviously, you will need to buy Twin Exclusive product to install it and cut keys. You can upgrade a customer's locks without replacing the complete lock cylinders. You will only have to switch out the plugs and the components within the plug.

For additional information on ASSA products and programs, contact: ASSA Inc., 110 Sargent Drive, P.O. Box 9453, New Haven, CT 06534-3242. Phone: 800/235-7482. FAX: 800/892-3256. Website: www.assalock.com. Circle 289 on Rapid Reply.

For updates and corrections of my technical articles, you can find my website at: <http://home.earthlink.net/~lockwriter>. Look for the link to "Tech Article Addendum."

TNL

The ILCO Millenium



by
Richard Allen Dickey

Millenium® Entry is an on-line access control system developed by KABA-ILCO. It is designed to control the access of 1 to 50 doors. Anything from an employee entrance to sensitive areas can be controlled and

monitored by the Millenium Entry system. Millenium Entry gives each person access to only those areas they are permitted and provides instant reporting of events and alarms.

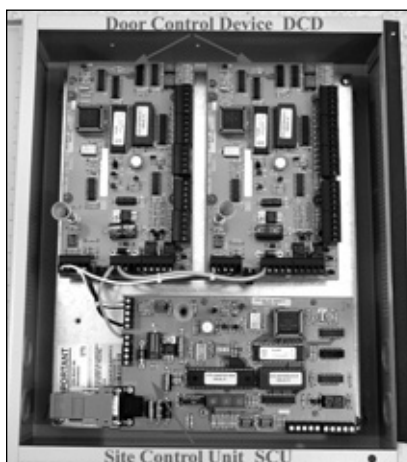
The system can notify the operator if the wrong card or PIN is presented, or if sensors in low-traffic rooms such as utility cabinets, server rooms, etc. are tripped. It is even capable of operating parking



1. The Millenium® Entry System from KABA-ILCO.



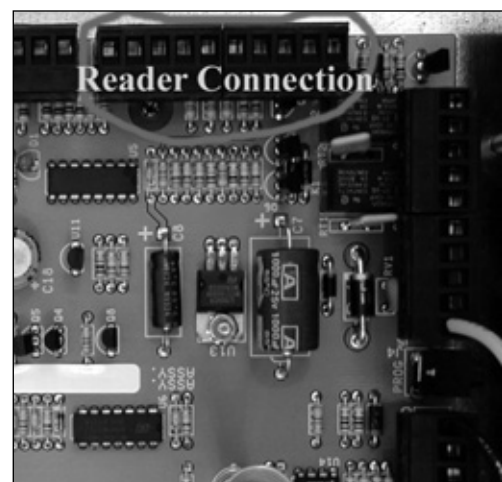
3. There is one DCD for each door that has to be controlled.



2. The main hardware components of the Millenium system are two Door Control Devices "DCD" and a Site Control Unit "SCU".

The system is sold in convenient kits, which include two proximity readers, cables, a pre-wired control panel, power supply with transformer, computer software, instructions and an optional keypad reader is available. (See photograph 1.) This is everything needed to control two doors. The 2-door kit can be expanded in the future to meet growth.

Some of the features of the Millenium Entry system include report generation, add or remove users, design access schedules, open doors remotely and respond to alarms quickly with a few mouse clicks.



4. The door reader is connected to several screw down terminals located at position "J2" on the DCD.



5. Your favorite door locking device is connected here.



6. There are 7 alarm inputs that can be used for almost anything.

gates or other devices directly from the PC if desired.

The proximity readers that are included accommodate high traffic



7. Each DCD has to have its own address. Two selector switches are provided for address selection.

areas without slowing anyone down, and the economical numeric keypad is ideal for doors with limited traffic. Now let's take a closer look at a few of these items.

The heart of the system is located inside a large wall mounted box. There you will find two door control devices and one site control unit. (See photograph 2.)

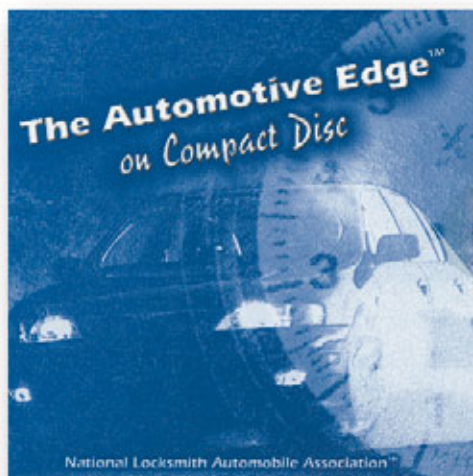
The Door Control Devices (DCD) are just what you would guess. (See

photograph 3.) They control everything that has to do with the door. The door reader (see photograph 4) is connected to the DCD as well as the electric strike or magnetic lock that is used to secure the door. (See photograph 5.) Everything that is connected to the DCD receives its power from the DCD.

The DCD also has seven alarm inputs. (See photograph 6.) Four of these are supervised and the other three are not. Just as a refresher, supervised means the input has an end of line (EOL) resistor associated with it. This is so the system can detect tampering.

So the system can tell one door from another, the DCD is equipped with two switches used to set the address of the board. (See photograph 7.) Each DCD must have a different address.

No system would be complete without a tamper switch. Each board has a tamper switch with a long spring attached. (See photograph 8.) The spring pushes the switch down when the door is closed. Since each



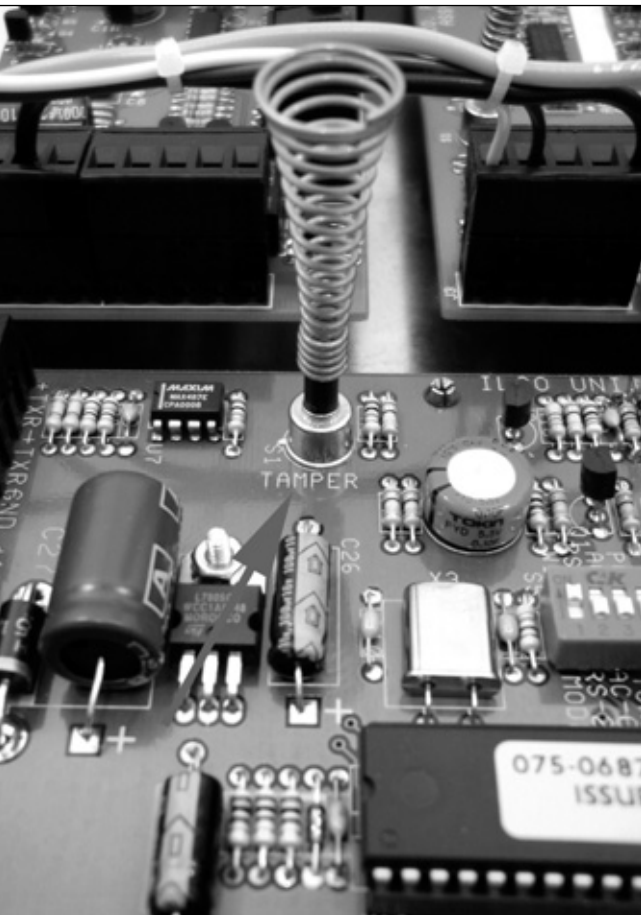
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#AE - CD



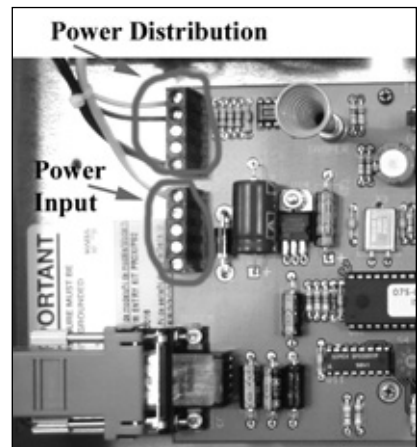
8. The DCD's as well as the SCU has a tamper switch. When the door is shut, spring pressure holds the switches down.

photograph 9.) It also has a dip switch that will allow three types of communication settings: Direct wired, trunk interface unit or a modem connection.

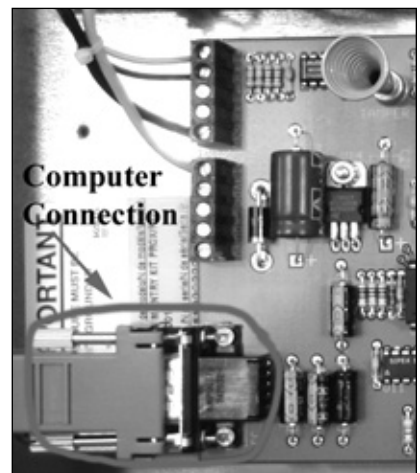
The SCU is also responsible for accepting main power from the power supply and distributing power to the DCD's. (See photograph 10.) This is also the board that connects the system to the computer. (See photograph 11.)

Since I just mentioned the power, I will show you where it comes from. The power supply provided is of the 12 VDC variety. (See photograph 12.) It is capable of powering the Millenium entry system as well as charging a battery backup (not provided) in case of a power failure.

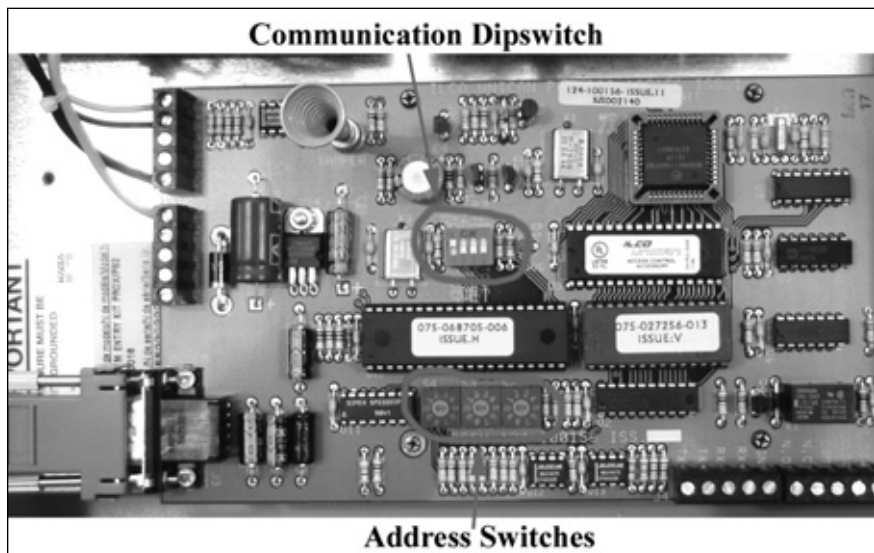
Is there anything really cool about this power supply? Yes there is, but



10. The power connections from the power supply, as well as the power distribution for the DCD's is held in place by screw down connections.



11. A 9 pin "D" connector is used to interface the SCU to a flat RJ-12 data cable that continues on to the computer.



9. The SCU has three selector switches for addressing. There is also a dip switch used to select the type of communications that will be used to connect the SCU and the computer.

board has one, there are a total of three tamper switches in each unit.

The third board in the system is the Site Control Unit (SCU). Its purpose is to interface the DCD's to the computer. It has a set of address switches like the DCD board. (See

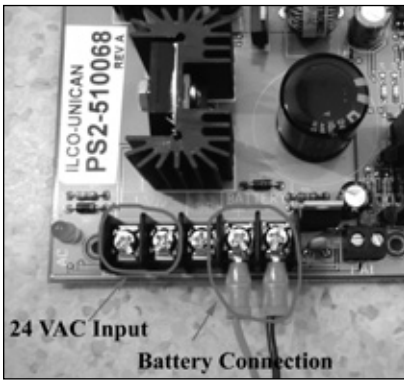
let me hit on a few basic things first. The main power supply is powered by a 24 VAC plug-in power supply, that is connected to the AC input. (See photograph 13.) Right next to the AC input is the battery connection. For power outputs, there



12. The power supply is housed in a separate metal box that is designed to be wall mounted.

are two, 12 VDC (actually 13.4 VDC) connections labeled DC1 and DC2. (See photograph 14.)

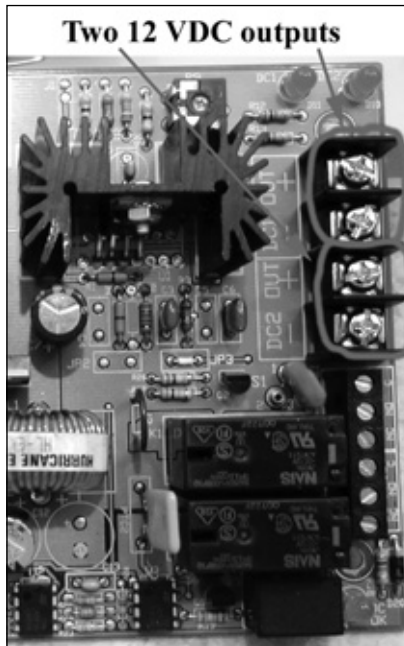
Now here is the really cool part. There are two fault outputs on the power supply board. (See photograph 15.) One is in case there is an AC power failure to the board and the second if for a DC power failure leaving the board. What is so cool about that? Well, the relays can be



13. Here you can see the power input connection as well as the battery connection located on the power supply circuit board.

connected to the alarm circuits of the Millenium system. If there is an AC power failure to the power supply, an alarm will go off at the computer terminal. That is if you have the battery backup installed. Can you see the possibilities?

What do you think so far? We've got wires and relays and readers and circuit boards and power supplies. I know I'm having fun. But it is time to move on. The software is another big thing to deal with. It is designed to work on a computer that is running



14. There are two 12 VDC outputs in the power supply.

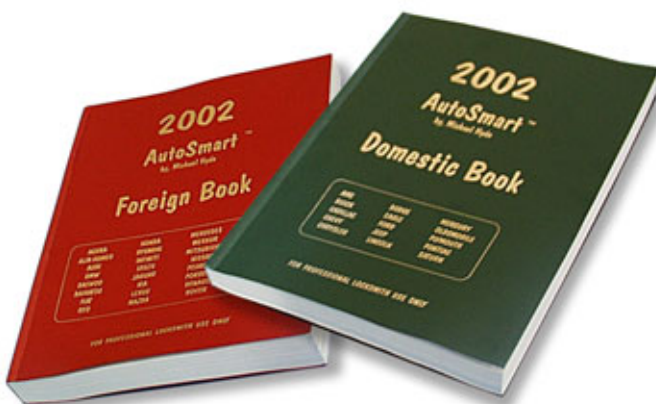
Windows 98 second edition or newer. I did try it on a Windows 95 machine. It installed just fine but it had trouble with some of the search features and reports.

To get the full feel of the software, I reinstalled it on my main computer



15. There are two fault outputs relays on the power supply board. One for AC and the other is for DC failures.

that is running Windows ME. Everything went just fine and all of the features worked without any problems. The first window that
Continued on page 48



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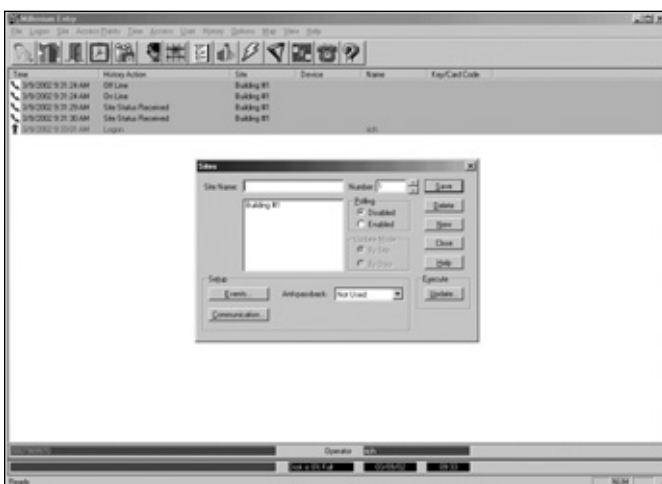
Continued from page 45



16. Here is the log on screen used to access the computer that is connected to the Millenium Entry system.



17. The first window you see after logging on is the main screen.



18. This window is used to enter the information needed to set up your site.

appears when you run the software is the log on screen. It wants to see an operator (user) and a password. (See photograph 16.)

After entering a user name and password you are taken to the main window (screen). (See photograph 17.) From the main window you are able to access all of the features of the program as well as see all of the activity at all of the doors that are on the system.

All of the different parts of the program can be accessed either from pull down menus or icons located at the top of the window. The first icon looks like a building and is used to create or edit sites.

From the site window you can change the site number so it matches the number that is set on the SCU. (See photograph 18.) Remember those three rotary

addresses? This is also where you select a com port for the computer to communicate with the SCU.

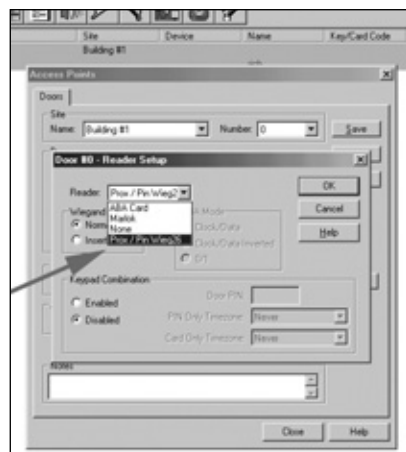
The next icon that looks like a door allows you to set up the DCD's. Since the DCD's will accept several different types of readers, there is a setup button that says "Reader". (See photograph 19.)

By clicking on the "Reader" button, you will be able to choose between the four different types of readers that are compatible with the Millenium Entry system. (See photograph 20.) The ones I will be using are the Wiegand 26 bit format readers. The Wiegand 26 bit format readers

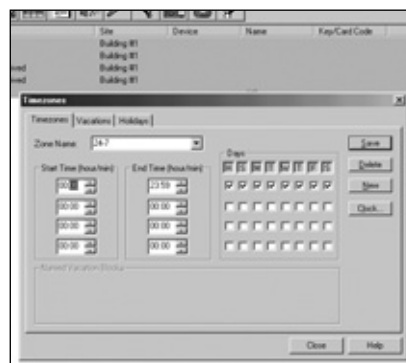
are available in everything from mag strips to fingerprint readers. I will be using a proximity reader and a keypad.



19. The "Access Points" window is used to set up the DCD for the type of reader that is to be used at that specific door.

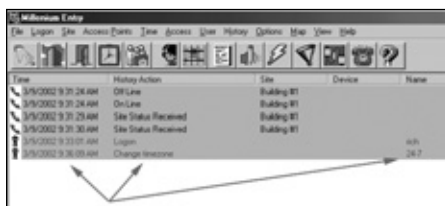


20. By clicking the "reader" button, another window will appear that allows you to enter the type of reader that will be used. There are four types that are compatible with the system.



21. Timezones are used to set times and days that entry is allowed.

The "Timezones" can be used to restrict user access to specific times. They can also be used to automatically open doors in the morning and relock them at night. The Timezones are able to accept



22. When any information window is updated, the information is sent to the SCU for storage as well as stored on the computers hard drive. This process is shown on the screen.



23. Access Groups work with Timezones to control the access for individual doors or entire systems.

vacation and holiday information as well as the typical time and day information that you would expect. (See photograph 21.)

As soon as you click the "Save" button, the new information is sent to the SCU for storage as well as to the hard drive of the computer. The main window shows an entry that the information was indeed sent to the SCU. (See photograph 22.)

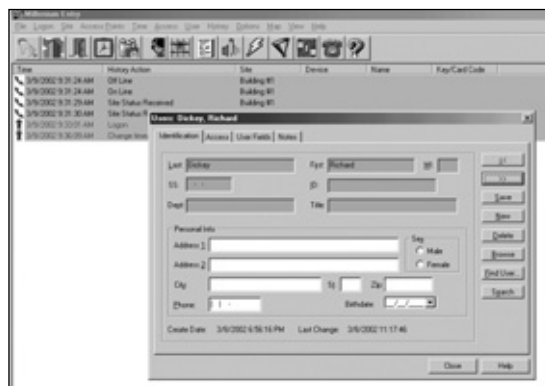
The "Access Groups" work with the Timezones to grant permission to specific doors at specific times. Any Timezone that has been created as well as the default Timezones can be assigned to any door. (See photograph 23.) In my example I named my group "Head Dogs" and assigned the Timezone named 24-7 that I set up earlier.

One of the last parts to set up is the "Users" information. There are four different pages of user information that you can enter. The first page is for the users name, address, phone number etc. (See photograph 24.) This page also indicates when the user was created and the last time the used information was changed.

The "Access" page of the users information is where the fun begins.

The reader type and access code is entered in the upper left of this window. The little down arrow is used to add the information to the user. (See photograph 25.) When this button is clicked, the information is moved down to the small box just like you see in the photograph.

On this same page, the users access group is selected. You can even add a picture of the user for



24. User information is added in four separate windows. The first is for general information.

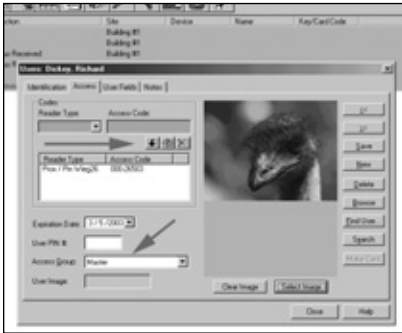
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#ASA - 2002



25. The access page is used to enter access code information, access group information and a photograph of the user if desired.



26. Here you can see some of the various types of information displayed by the computer as the events happen at the door.

identification purposes. Does this look like anyone you know? Anyway, the next two pages are for notes, automobile information and some other goodies.

Photograph 26, shows some of the information that is displayed at the computer when there is activity at a door. As you can see there are several "unlock" statements as well as "tamper alarm" and "invalid user" entries.

These statements come back to the computer in real time. As someone opens a door with an access code, the information is sent to the computer. Not bad! If your computer is dead, the door still works. You just can't change anything, like user information, until your computer is back up.

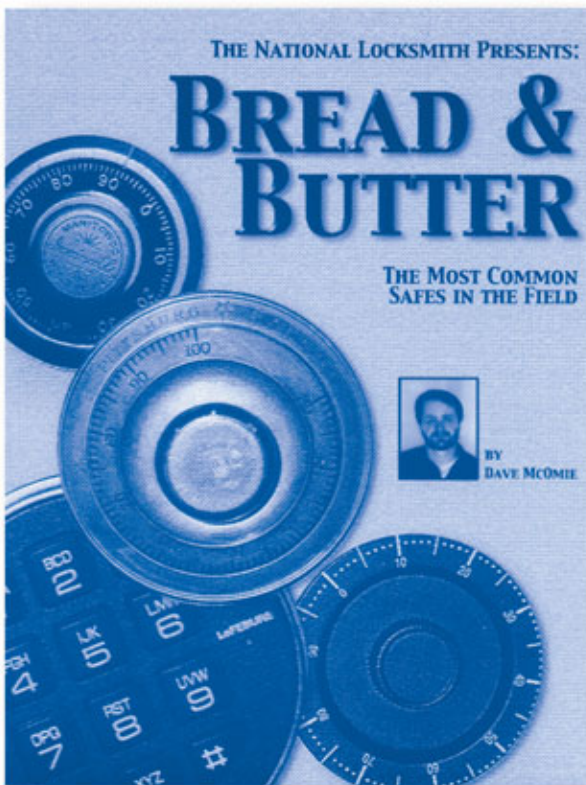
The Millenium Entry system is sold as a door control unit. I can see how it can be used as much more than just a door controller. Each DCD can be used to monitor up to seven different alarm inputs. These can be motion detectors, door contacts, glass breakage alarms or anything else you can think of.

The system can be used to turn electrical devices on and off and disable access to elevators and parking lots gates. It probably does a lot more that most people want, but who's complaining? Have a nice day!

For more information on the Millenium Entry system or other products from KABA-ILCO, call them at 1-888-217-5654 or fax a request to 1-888-217-5657. For international callers, use 1-514-735-5411. You can take a look at their products by visiting their web site at www.kaba-ilco.com. Circle number 290 on Rapid Reply.

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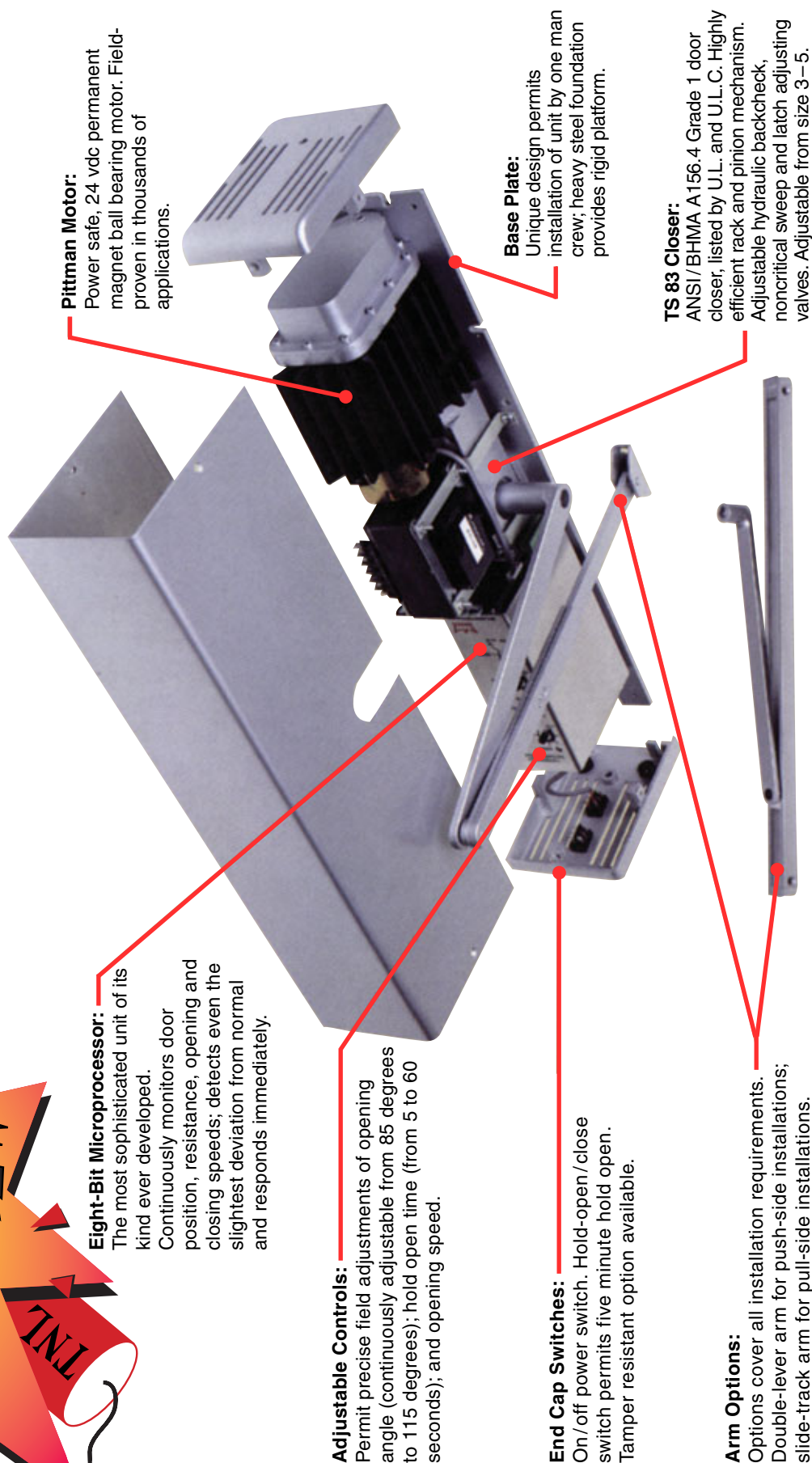


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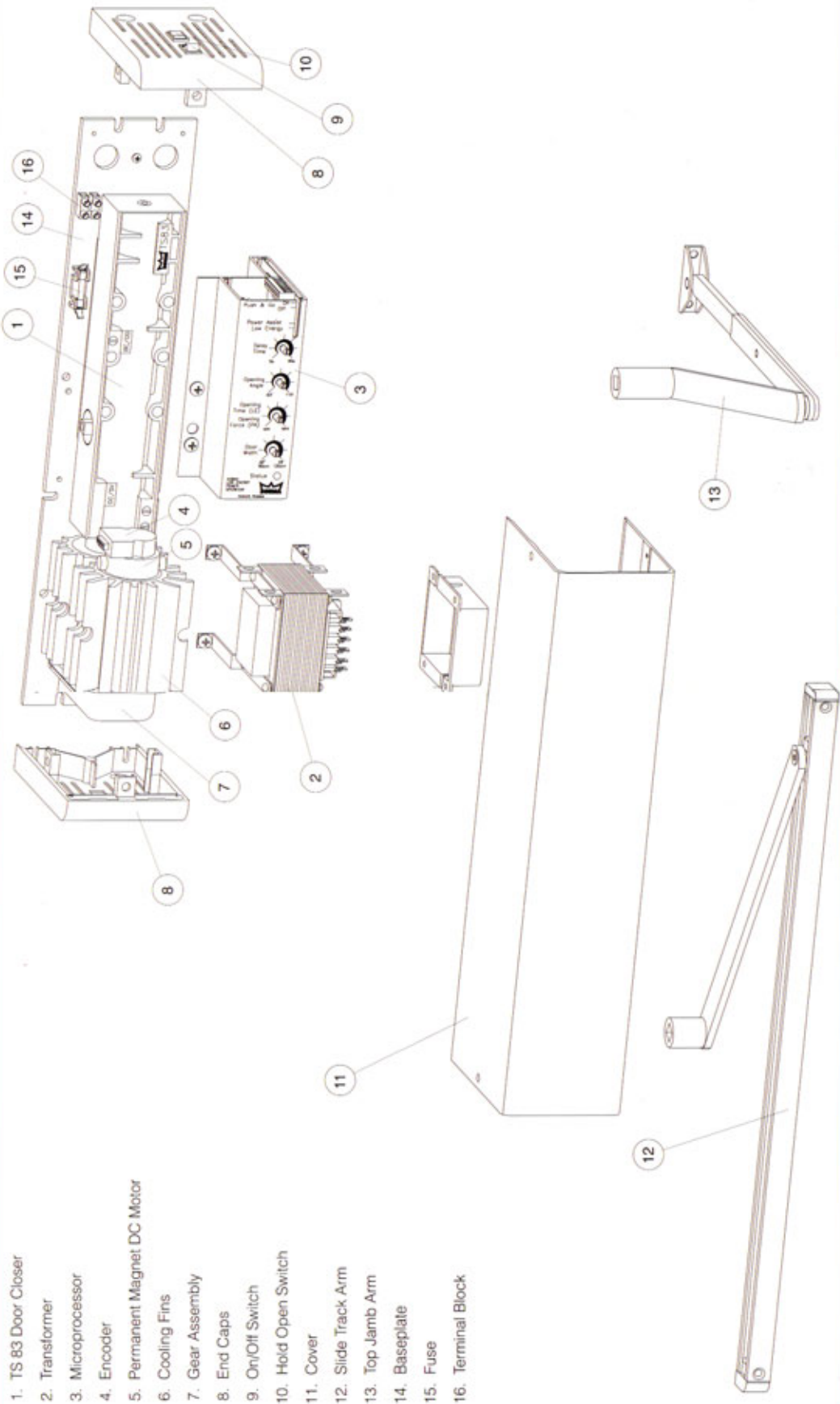


**EXPLODED
VIEW**



DORMA ED 800 Series

Parts and Assembly Details



1. TS 83 Door Closer
2. Transformer
3. Microprocessor
4. Encoder
5. Permanent Magnet DC Motor
6. Cooling Fins
7. Gear Assembly
8. End Caps
9. On/Off Switch
10. Hold Open Switch
11. Cover
12. Slide Track Arm
13. Top Jamb Arm
14. Baseplate
15. Fuse
16. Terminal Block

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MULTIMETERS

An
In-Depth
Overview

PART 4

by Richard Allen Dickey

Last month was probably the first exposure many of you have had with an analogue multimeter. You know, the ones that have the needle that swings across a field of meaningless numbers. (See *photograph 1.*) Well, hopefully last month took care of a lot of the confusion about how to understand all those numbers.

There is one important thing that we have not covered when dealing with an analogue multimeter. It is the calibration that is necessary when testing resistance.

If you remember from a few articles ago, current is used to measure resistance. When current flows easily through a wire, it is said to have a low resistance. If current does not flow easily through a wire, that wire has a high resistance. Exactly how much resistance something has can tell you if that something is good or bad.

Where does the current come from to measure resistance? It comes from a battery inside the multimeter. (See *photograph 2.*) A

strong battery can supply more current than a weak battery. Digital multimeters automatically compensate for this change in available current flow. Analogue multimeters do not. You have to adjust (calibrate) the multimeter before you test for resistance.

How do you do this? It's easy. All analogue multimeters have an adjustment dial somewhere on the case. (See *photograph 3.*) Some are on the side of the case and others are right up front, where you can't miss them. It doesn't matter where it is, just remember that it is there, somewhere.

See the thing in *photograph 4?* This is not the adjustment knob! This is called the "zero adjust screw" and is used to set the needle to the zero point on the far left side of the scale when the meter is turned off or not in use. Once set for the first time, it is almost never touched again.

Calibrating the multimeter to correctly read resistance is easy.

Continued on page 56



1. Although a battery is not needed with an analogue multimeter to read voltage, it is needed to take a resistance reading.

Continued from page 54

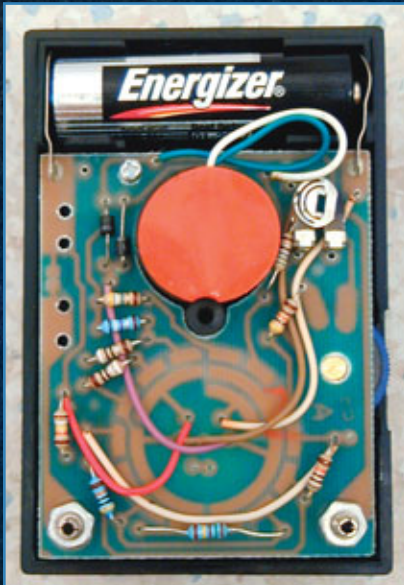
Simply set the selector switch to the desired resistance setting (range), touch the test leads together and look at the meter scale. Remember, when reading resistance, always use the very top portion of the scale. (See photograph 5.) It is the only part of

the scale that has a “0” on the right side instead of on the left. Is the needle pointing to the “0”? (See photograph 6.) If it is, there is nothing to adjust. If it is not, turn the adjusting knob until the needle is directly over the “0” on the far right side of the meter scale.

You will see that turning the adjusting knob will cause the needle to move one direction and turning it the other way will cause the needle to move the opposite direction. So now that it is

adjusted, it is good forever, right? Wrong! This calibration needs to be redone every time the selector switch is turned to a different range. Why?

When you turn the selector switch from one range to another, different electronic components inside the multimeter are added to and removed from the circuit. (See photograph 7.) These different components will require a little less or a little more current from the battery to operate properly. This



2. All analogue multimeters have an adjusting knob to calibrate the meter when reading resistance.



5. Always use the upper portion of the meter scale when reading resistance. The resistance portion of the scale is the only part that has a “0” on the right side.



8. Here the multimeter is calibrated to “0” while in the “x100” range position.



3. This is the adjusting screw. It is used to calibrate the actual meter scale when the meter is not in use.



6. Before taking a resistance reading, always calibrate the multimeter in the range that you intend to use.



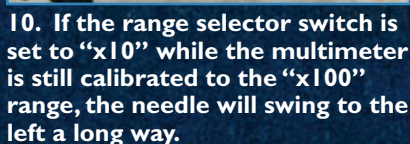
4. This is not the adjustment knob! This is called the “zero adjust screw.”



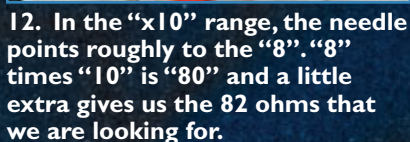
7. On this multimeter, there are three ranges to choose from by using the selector switch.



9. By changing the range to “x1k”, you can see that the needle has moved to the right of “0”. To use this range, you need to recalibrate the multimeter.



11. This is a 5 watt, 82 ohm ceramic resistor that will be used in the next example.



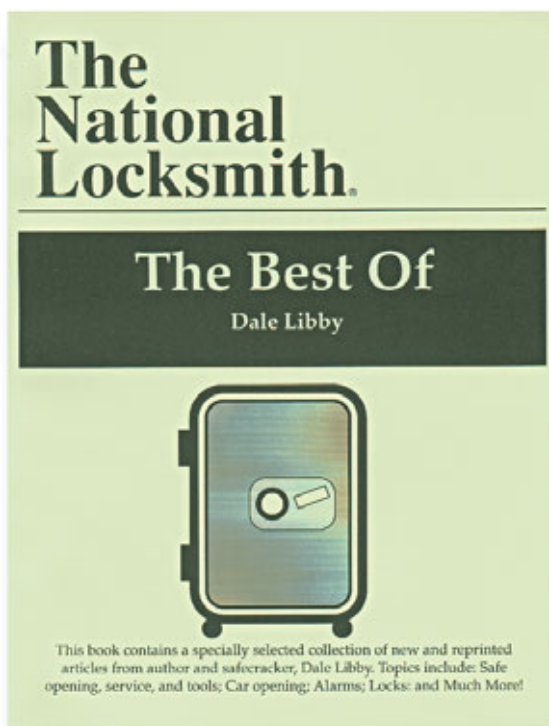
With the selector switch in the “x100” position, I turned the adjusting knob until the needle was over the “0” on the right side of the scale. (*See photograph 8.*) Without touching anything else, I turned the selector switch to the “1k” position. (*See photograph 9.*) As you can see the needle moved to the right as far as it could go.

Next I turned the selector switch to the “x10” position. I still haven’t

touched anything except the selector switch and you can see that the needle has moved to the left a long way. (*See photograph 10.*) This is why it is important to recalibrate the multimeter every time you change the position of the selector switch.

If you are not able to adjust the needle all the way to the "0" in one or more of the ranges, it is a good indication that the battery inside the multimeter is going bad. Replace it with a good one and things should be back to normal. Now lets get down to some real testing.

The Best of Dale Libby



These are the articles that started the
safe opening revolution.

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#DALE

To show you how different the reading on the scale will look when measuring the same thing, but using different ranges, I will use an 82 ohm ceramic resistor. (See photograph 11.) After calibrating

the multimeter in the “x10” range, I have connected the test leads to the resistor. As you can see, the reading is just a little over “8”. (See photograph 12.) Are we forgetting anything? That’s right, since we

are in the “x10” range, we have to multiply the “8” by “10” and we get “80”. Since the needle is just a little over “8” on the ohms scale, I would say that we are almost exactly 82 ohms.



13. Here in the “x100” range it is a little harder to get an accurate reading, but it can still be done. Remember that you have to multiply the reading on the scale by “100” while in the “x100” range.




14. Anything that you read while in the “x1k” range has to be multiplied by “1000”. As you can see, it is impossible to accurately read the 82 ohm resistor while in this range.

Without forgetting to recalibrate the multimeter, I am using the same resistor with the range selector switch in the “x100” position. In this case the needle is to the right of the number “1”. Since we are in the “x100” range, the “1” is actually equal to “100”. (See photograph 13.)

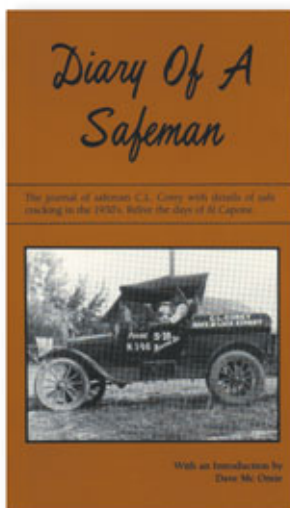
It is a little harder to figure this one out, but if the “1” is really “100” and the needle is to the right of the “1”, then the value of the resistor must be less than 100 ohms. We know that the resistor is 82 ohms, so the needle is right where it should be.

If the range selector switch is changed to the “x1k” position, the reading is even more difficult to figure out. (See photograph 14.) If you multiply the “1” by “1000” (1k) you can see how difficult it is to read a small value like “82”. Because the needle is so close to the “0”, determining an accurate reading would be impossible. If you compare photograph 12 to photograph 14, it is easy to see that it would be much easier to determine the value of the resistor in photograph 12 than it would be in photograph 14.

There is one important thing to remember when measuring resistance. Never try to take a resistance measurement if there is a voltage applied to the circuit. How can you tell if there is a voltage? Test it first. It only takes a few seconds to test for AC and DC voltage before testing resistance. If you don’t test it for voltage first, sooner or later you will experience the smoke theory. What’s the smoke theory? All electronic components come from the factory with smoke inside. When you let the smoke out, it doesn’t work anymore. How’s that for a theory?

I hope this has helped some of you to better understand how to use an analogue multimeter. They really are easy to use with a little bit of practice. Next time we will measure current. You know, Amps. Good luck and don’t give up. Electricity is your friend! 

Diary Of A Safeman



This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

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#DIARY

Beginner's Corner

By
Mike
Avco

Achieving a Bigger Bottom Line

A store owner who is not putting forth every effort to increase his business volume by the sale of key chains, accessories and novelties, is not doing all he can to make this the greatest year ever. A good business man/salesperson can increase the average receipts of an establishment 10 to 50 percent without requiring a single additional customer. This can be achieved by calling attention to the products and additional services that his shop has to offer.

This trade is not getting its share of business because its members are making little or no effort to get it. You are in the selling business. You may believe you are only a store owner/service provider, but if you have no selling ability, you should cease to own a shop of your own and work at home.

In order to be a successful shop owner, you must be both a salesman and a mechanic. If you are only a mechanic, then you should employ a good salesperson. He or she could more than earn their wage every day by selling your customers products or services they would not consider themselves.

Give some thought to the selling end of your business and you just may be surprised what your balance sheet reflects at the end of the year.

If you are not selling as much as you'd like to be, here's some advice on how to improve your bottom line.

Merchandising

The first thing your customer sees when he walks in the door is the physical make-up of your store. What does it look like? Walk into your shop every now and then and put your customer's hat on. Forget about being the owner of the business, forget that you have 43 cylinders to master key. Forget about the fact that the Yellow Pages salesman is coming later. Just walk in the door and say, "Would I want to shop here?"

When organizing a store, think about the following:

Lay your store out by sections. Every time you go to the grocery store all the salad dressings are in one place, all the produce is in another. Lay your store out in sections by having all your key chains in one place, padlocks in another, etc. Have a men's section where there is several items that are used primarily by men. Have a section for women. Items that do not fall into either of these categories can go into a miscellaneous section. Keep all of your key cases together, all the metal snaps together, etc. Keep a little tag on each hook so you know what belongs there when you sell out.

Keep the stock on the shelf full. A lot of people have the attitude that if their displays are empty, it looks as if they are selling something. I have not been to a department store, or a shoe store or any other store that looks empty. These companies are pretty successful when it comes to merchandising and every morning before the store opens, they replenish everything that is on the floor. If they sold five pairs of slacks they put those five back on the racks because they want the store to look full when a customer comes in. They want to make sure their customers have a good selection. Empty hooks mean you are selling air.

Fixtures

There are a number of different ways to fixture a store. Some of you may have slatwall. That is a very easy way to fixture your shop. You can easily move your displays or make changes. You are not fixed in location like you are with pegboard.

Slatwall is generally inexpensive and if you're looking to save even more, keep an eye out for stores that are closing where you can buy used slatwall. Pegboard is not a bad alternative. It also creates a display

up on the wall and you can paint it whatever color you like.

If you have the space, stand-alone displays are also very attractive and effective. Keep your displays clean. A feather duster costs \$1.29 at K-Mart or Wal-Mart. Go around the store once a week and brush the dust off the displays. Make the merchandise look fresh even if it is two or three months old. It does not take a lot of time to keep your store clean. Set aside fifteen minutes one day a week. The difference will be amazing.

Decorating Your Store

It does not take a lot to decorate your store effectively. Most store front-ends are not that big. Is your store carpeted? How does it look? A new carpet will not set you back that much and will make all the difference in the world. Do the same for tile. Make sure to vacuum or sweep it regularly.

Maybe a fresh coat of paint is in order. Preferably, stay with light colors as they brighten up the room. Olive green does nothing. Navy blue will darken it like the dead of night. Use a light, pleasant color.

Make sure you have adequate lighting in your store. Track lights work very nicely and are inexpensive.

Use Your Counter

Make sure you are always using your counter. It is the most valuable piece of real estate in your store. Use it to sell, but do not use it to oversell. You need space for your customers to put their keys down.

Selling Techniques

It takes 3.5 seconds to say, "Do you need a key chain for those new keys?" It puts the idea in their brain and that may be all it takes to get a sale. There is not a single one of us that has not been sucked into an apple pie, fries or a drink at McDonalds that we did not originally

intend on ordering. Think about it the next time you go through a fast food establishment. They are always trying to get you to buy more items. You have the opportunity to do the same thing.

Let's say that 200 customers walk through your door in a week. That means you have 200 selling opportunities a week. If 50 percent of them buy a \$3.00 extra item such as a key chain or key case, then you have \$300 extra dollars, 50 percent or more of which is profit.

The only place that I know of today where you can get a 50 percent return on your investment is with retail merchandise. Take that a little further and you come up with \$7,800 extra dollars per year without one additional customer walking through your door. If every customer tells two people how well they were served then the numbers increase quite a bit.

Suggestive Selling

Just by suggesting an item you will increase your sales. The guy who comes in with 27 keys on his ring might not be aware of pull-apart key rings. A woman who works in the office down the street might like a wrist coil to keep her desk key on. The jogger who comes in would appreciate you pointing out the neck strings to keep his keys on. Or the lady who just locked her keys in the car would absolutely love a magnetic key box.

Put a little note on your cash register to remind yourself and your employees to suggest an item to each and every customer that comes through your door.

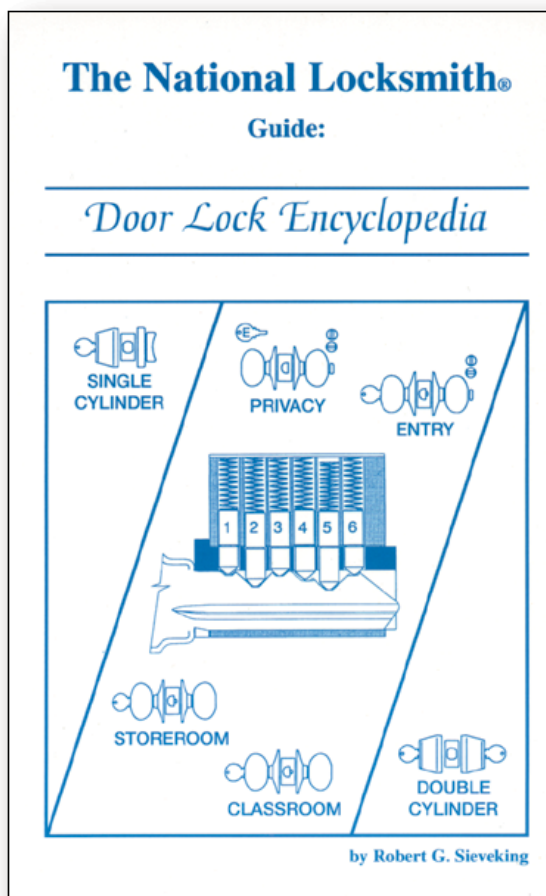
Retail Is An Investment

Retail inventory is an investment. Don't think of it as an expense. If you put \$400 up on your wall you will get at least \$800 back for it. It makes sense to invest in your business?

Every customer is a candidate for key chains and accessories. They are not all going to be buyers, but everybody is a candidate, and if you do not try to sell them, you don't know whether they will buy or they won't buy. Remember, it only takes 3.5 seconds to ask them the question and even less time to make the sale.

TNL

Door Lock Encyclopedia



The ability to remove a lock from a door, disassemble the mechanism, and remove the lock cylinder for service is not always a simple straightforward task.

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#DLE

The Lighter Side

Shazam!



by Sara Probasco

When a man timidly opened the door to my office and accepted my invitation to come in, I had no idea what he wanted, and certainly no inkling that I would profit from his coming far more than he would. Tall and thin, he had clear blue eyes, an easy smile, and white hair, but I wouldn't have guessed him to be even close to seventy-three.

Bill was his name, and he said he was a locksmith, "of sorts," though he'd never had much formal training in the profession, just a book or two here and there, and a lot of trial and error, paired with common sense over the thirty years or so he'd lived around these parts.

"It's kinda like repairing farm equipment," he said. "You do what you can, and what you can't, you figure out."

He'd read my book, *Service With a Smile*, he said – bought a copy a couple years ago – and he'd enjoyed it, even found himself in a few of the stories and had some belly-laughs. Mainly, he just wanted somebody to talk to for a spell, who could appreciate some of the things he'd run up against over the years, so he'd dropped into our store to chat.

Laying aside my usual office work, I sat with him and thoroughly enjoyed the next three hours of his day. One of the most interesting things he related to me was the time he was called to open a locked safe. He'd tried everything he could think of, to no avail, and was down to the "figuring" stage, when he noticed the door didn't fit entirely snug. It seemed to gap just a bit at two diagonal corners. Drawing upon his years of doing odd jobs, from furniture-making to gunsmithing and everything in between, his common sense kicked in, and he figured if he could find a way to straighten the door in its frame "just a skosh" he might get it open.

That's when he began looking around for a tool he could use and decided upon a large furniture clamp he had made of metal pipe. This he proceeded to attach it to the diagonals of the safe. Exerting as much force as possible, he managed to "square" the door and frame just enough that the already unlocked door could easily be pried open.

"You know," he told me, "I've been surprised how many small- to medium-size safes will open when you 'diagonalize' them like I did that one. I don't know if it's the hinges that give just a little, or if the door or frame warp a bit with time, but whenever I'm faced with an old safe that unlocks, but just won't open, I try my big furniture clamp on it. You'd be surprised how many I get into that way."

I told Don about the conversation, later, and he was a bit skeptical, until I mentioned the man's name.

"Well, if Bill said he did it, I believe him," Don said. "He's got quite a reputation around here for his honesty and for his ability to do most anything he puts his shoulder to."

I couldn't help being reminded of Don's rubber band "magic."

A few years back, he was called to the local sheriff's office to open a large Meilink fire safe. Now, sometimes opening safes is easy for Don, and sometimes not, depending upon circumstances. This one was set back in a small closet, affording precious little working space. He decided he would have to drill it, so he could drive back the cam of the safe door bolt with a punch and hammer and turn it past the locking bolt of the combination lock. He completed the drilling as planned, but due to the close quarters of the narrow closet, he couldn't hold the punch with one hand and hit it with

as much force as necessary. When he tried using both hands on the hammer, the punch bounced out of position on impact.

"There's got to be some way I can secure the punch," he thought. Coming from a farming background himself, he set to "figuring." Stepping from the closet, he glanced about the room for an idea. There on a desk lay two large, heavy rubber bands.

"Maybe," he thought. "Mind if I use these?" he asked the deputy seated there. "I need them to get this safe open."

A puzzled look washed over the deputy's face. "Sure. Help yourself," he replied.

Don tested their elasticity between his hands as he returned to the closet. Wrapping them carefully around the punch, he stretched them taut and pulled them around the safe's handle, creating enough tension to hold the punch in place. Now, maybe he could use both hands on the hammer.

The idea was good in theory, but the tension created by the rubber bands was still insufficient to keep the punch from bouncing loose under the onslaught.

"Could one of you guys give me a hand for a minute?" he asked.

All three deputies stepped forward, curious about what he was doing in there, and eager for a first-hand look.

"Now, I'm going to hold this punch in place," Don said to one of the men, "and I need you to take this hammer with both hands and hit the punch one time, hard."

The deputy gladly complied while the other two peered over his shoulder.

Don wasn't using the rubber bands, but he didn't bother to

remove them, because they wouldn't hinder the operation. Handing the hammer to the deputy, he held the punch steady as the deputy gripped the tool in both hands, swung back ceremoniously, and gave the punch a sharp blow. Then Don released the bands from the safe's handle and opened the door.

"That did it," he said to the men as the door swung back. "Thanks for your help."

Amazed, the deputies withdrew to the other side of the room and huddled together, speaking to each other in awed tones about how Don had opened the safe.

"Did you see that?" one of them whispered.

"No. You were in the way. What did he do?"

"He opened the danged thing with a rubber band!"

"Come on," the other deputy scoffed.

"No fooling. I was watching him."

"How could he do that?" he asked the first.

"Well, to tell you the truth, I'm not exactly sure. A while ago, I heard him drilling something. I think he made a little hole in the safe door. Then he stuck his punch in the hole and tapped it in tight. I saw him wrap those big rubber bands around the punch and pull them down tight around the safe handle. That's when he came to ask us to help him. Then, just now, he had me hit the punch with his hammer, while he kinda twanged the rubber band, and the danged door came unlocked. He just reached over and opened it, slick as a whistle. Beats anything I ever saw."

"No, no, no. That can't be," offered the second deputy. "When he tapped the punch, I heard a little 'pop.' He must have set off an explosion that blew the lock open. That rubber band was just something to throw us off track."

"You're so smart," the first deputy retorted, "tell us how explosives got inside the safe."

For a moment, the challenged man seemed stumped. Then his face brightened.

"He probably stuffed something in through that little hole he drilled before he inserted the punch. Yeah. I'll bet that's what he did."

By this time, Don was about to erupt into convulsive laughter as he tried to gather his tools nonchalantly, without appearing to be eavesdropping on the men's conversation. His intention was to leave them wondering, but they weren't about to let him get away without an explanation.

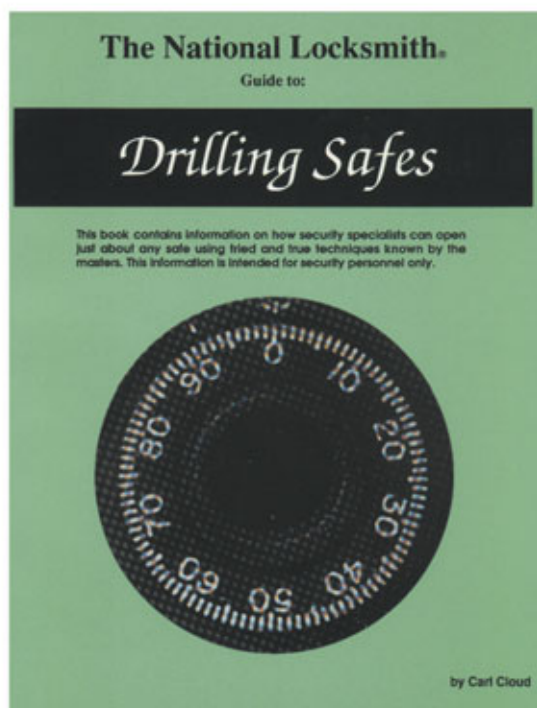
"Hey, Don," one of the deputies called, "how did you get that safe open, anyway? With the rubber bands or some kind of explosives?"

Don wiped the smile from his face as he replied, "Neither one."

"Yeah? Well, then, what did you do to get in it?"

Glancing about, Don leaned forward conspiratorially as the men closed in, eager to learn the secret of his success. His eyes twinkling, Don whispered to them his favorite explanation.

"I just wiggled my fingers and said, 'Shazam!'" **TNL**



Drilling Safes

One of the most expert safemen in the country, Carl Cloud has written a very important book on safe opening.

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by
Dale W. Libby, CMS

ATM- FRENCH Style

Yes, it is true. I do ATM work sometimes and learn the hard way. What is most important to realize is that the technician, once he starts to work on a particular unit, is the Man in charge (or woman in charge). When it comes to working on safes, there can only be one chief, and that is the guy doing the job.

The circumstances of getting to finally drill this unit needs mentioning. A large contract had been sold to the METRA transportation system for conductors. The ATM in question (French SIAB) did not dispense money. Instead, it took money, counted the money, and gave the conductors a receipt of funds deposited. An interesting situation.

One week before, an identical ATM unit was delivered to the Metra conductor's building in Aurora, Illinois. The first unit was delivered and it fell over on the delivery person and broke his arm as well as crunching the ATM itself. This was the second unit delivered to this out of the way, down a stone road outbuilding. I was called on to open the unit, for it would not open. The combination would dial and the dial would stop at number 99, when it should have fully stopped at number 90. It sounded like the safe reloading trigger of the combination lock was set off.

When I finally found the location, I also found the locked ATM and a spare parts box. It contained the back cover to a LaGard lock, along with a strange piece of bent metal that resembled a relock hold back bar. Also, there was a new Kaba-Mas combination lock. It took about 1 minute to determine that the LaGard internal relocker

had been set off. There was another 100% possibility that the external relocker was also set off. The deliverymen were still there waiting for me to perform minute magic. I shook my head and stated that they should return the ATM to the factory warehouse (about 50 miles away) and I would work on it there.

The delivery people were upset and called the factory for orders. The factory said that the man from Diebold was on his way out to diagnose the unit. Wait for the man and he would determine what to do. Now I was mad. My word should have been the last word. I really did not mind, for I noted the time it took me to get to Aurora, and the waiting time until the Diebold man showed up. Even if I did not open the ATM, the parent company would pay my waiting time.

There were several reasons why I did not want to work on the ATM at the spot where it was delivered. It was very cold and wet where the ATM was positioned and it was near an outside door where a lot of people were walking through. It was a highly traveled area with lots of interruptions. Too public and too visible with too many Rubber Neckers. I found out that the factory warehouse had many more of these units in stock, ready to be delivered and programmed. Since I had never worked on a unit like this, I could open another working unit and take measurements for the external relockers and get the unit open. Also, the factory wanted me to install the new electronic lock on site and program it. This was not part of the original deal. It was an afterthought by the ATM people.

The unit was a Siab ATM, made by, or for, Richard Ducros. It was imported to the USA and Diebold had something to do with it. This is the unit as I first saw it. (See photograph 1.) The cover is locked with a small cam lock. The whole cover door can be, and was, removed. There are only two screws that hold the door to the safe. It

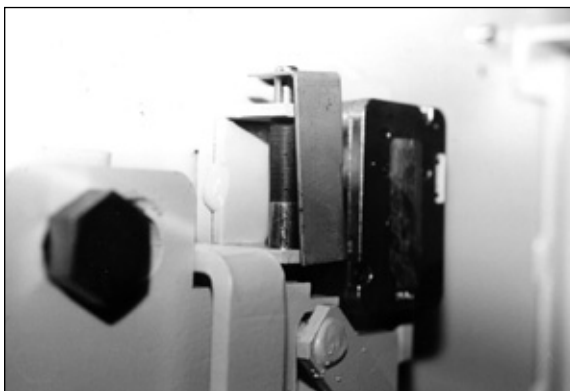


1. Saib (French) ATM with LaGard lock and dial.



2. The two holes at 3:00 and 6:00 o'clock are for the combination lock bolt and the fired relock spring-loaded bolt.

They were not happy. This was the second time they had moved the heavy unit to this hard to find location, and they were not happy about moving this unit again. The METRA people were mad for they were already a week late in activating this unit. Not My Fault.



3. There is no connection between the relocker and the lock body in any way.

made working on the front of the door easy and kept the cover from slamming shut while I was working on it. The Diebold man finally showed up and confirmed my diagnosis, and told the movers to take this unit back to the factory and return with a new one that had the new lock on it which was already programmed. I heartily agreed with the man from Diebold.

My work that day was done. I had already put in two hours and had done nothing. It was a Friday afternoon, it was late, and I was tired. I again called the factory and asked if I could open the unit the next Monday. They agreed, as there was no real emergency as long as the unit was back at the warehouse.

Going to the main warehouse reminded me of a Penetration Party. The warehouse was filled with open and locked safes, ATM's, vault doors, and a lot of other items with locks on them. It was like paradise. They had just bought out a series of banks that went under, and were over stuffed with bank equipment including teller vaults and desks. It was a literal maze to get to the unit to be opened, to find power, and to wander over to an open unit to take measurements.

Photograph 2, shows the front of the ATM that I worked on. There are two holes at the left of the picture that show where the cover door was attached. After removing the LaGard dial and dial ring, I measured out 2-1/2" right and straight down from dial center. The hole at 3:00 o'clock was for the relocker and the hole at 6:00 o'clock was to punch the locking bolt of the combination lock. The lock was mounted Vertical Down (VD). The little piece of metal to the left of the opening handle is

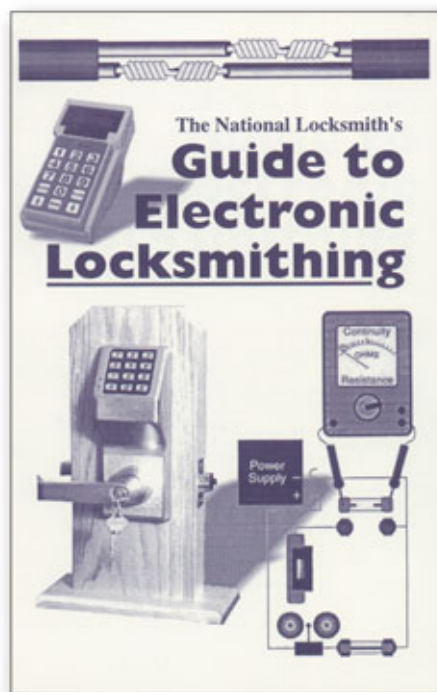
what the cam lock hooked on to keep the cover door closed.

This ATM was to be sent out that afternoon. The side view of the relocker is shown in *photograph 3*. The spring is depressed and the relocker plate is bolted to the ATM inner door surface. That is it. There was no connection to the combination lock or to the back cover. *Photograph 4*, shows this



4. Note the lock bolt and the square anti-punching stud to the right of the lock bolt. This keeps one from punching the bolt bar back and shearing the lock bolt.

Electronic Locksmithing

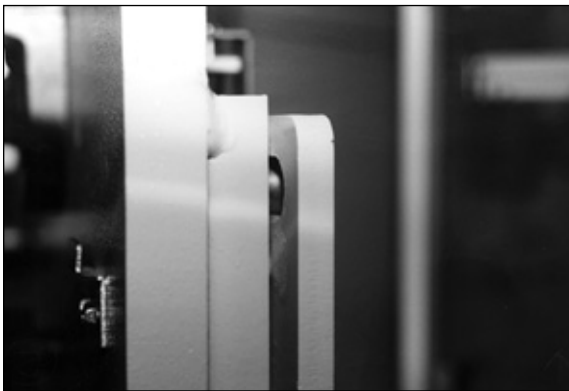


Everyone knows there's big money in selling, installing and servicing electronic security such as mag locks, electronic strikes, and simple access control.

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#EL - 1



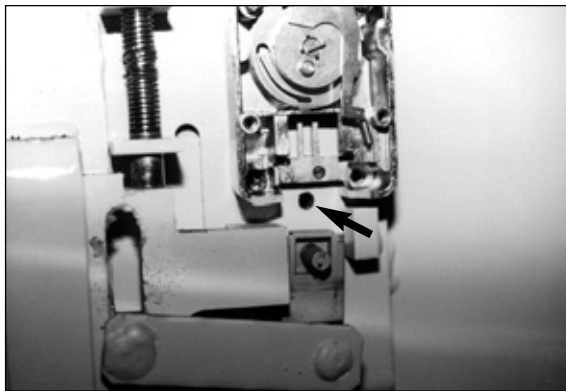
5. Massive single bolt bar extends down the entire length of the ATM door.

better. It also shows the configuration of the combination lock bolt.

There is a large blocker metal stud to the right of the bolt. That is so that the locking bar cannot be punched when the bolt is thrown. You can also see that the relocker is an 'air' relocker. There is no connection to the lock, under, on top of, or to the side of the combination lock. *Photograph 5*, shows a side view of the locking bolt bar. It is 1/2" thick and quite long.

Photograph 6, shows the hole that I drilled to punch the

combination lock bolt into the safe. The fired relocker is also shown dropped down to a milled ledge on the bolt. When fired, it will keep the handle from moving the bolt to the open position. When I punched the bolt in, it must have bounced off the back cover (removed in all my pictures) and fallen into the slot as shown. After punching, the bolt handle moved less than before punching. I stuck my

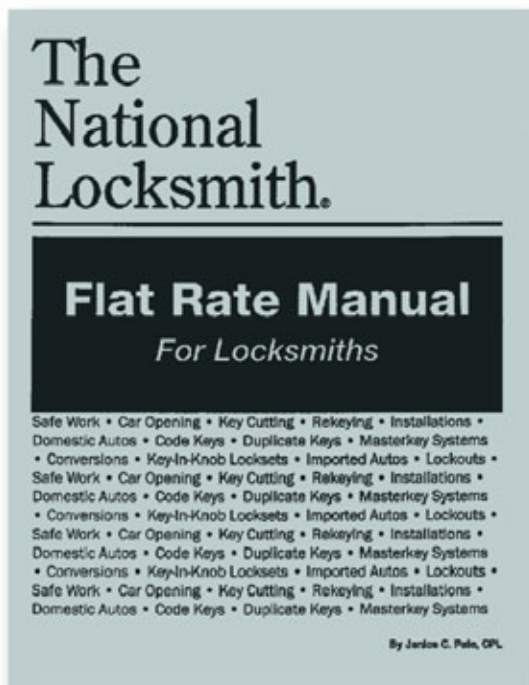


6. The hole I drilled to punch the bolt back is shown, along with the shot relocker.

scope in and saw that the end of the combination lock bolt had lodged between the opening bolt end of the bar and the blocker bolt. (As shown by the re-enactment shown in *photograph 6*.)

I just had to shake the door and move the bolt handle and the punched bolt fell to the bottom of the safe door. (Murphy's laws.) If you look closely, you can see that the relocker spring is somewhat bent up. When I drilled my second hole, again through hardplate, I saw the coils of the spring wide apart. That meant that the second relocker did indeed fire. Apparently, the person who was retrofitting the new lock accidentally closed the door and the relocker fired before he could disable it. Apparently the movers thought that this safe was ready to go and they delivered it.

Photograph 7, shows the open ATM. I had to probe the relocker up, turn the handle to hold it half up, and then probe it again. The Saib ATM opened in about 1 hour, but the time spent moving, jumping, and worming my way through the maze took another hour including clean up. I had to



Flat Rate Manual

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"Price for Profit!"

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add the 2 hours I spent on Friday as well. This was an expensive job for the customer. This whole job, including a broken and bent ATM was a disaster for the customer. They were happy when it was all over. *Photograph 8*, shows the repaired unit with the Kaba-Mas lock and the outer door affixed.

A few afterthoughts here. The company I do this work for is a large concern. They service and sell and move safes, office equipment, vault doors, safe deposit nests and heavy equipment. Luckily, they use several different safecrackers due to

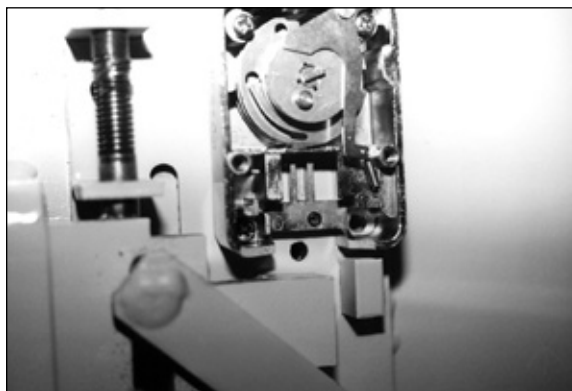
geographical locations. They have one for the north suburbs of Chicago and another for the Southern areas of Chicago land. I do the western areas for them. This is an interesting company. They have a work force to move and repair safe equipment. They also weld and paint and replace locks. Even electronic locks. They do all their own safe lock installation. The only thing they do not do is

drill holes in safes or vaults. They tell me "That is My job!" They do all their own door and cosmetic repairs. At least they are saving money on that front.

It is good to have back up when you mess up. Sometimes my reasoning is very strange and it gets me into trouble. Luckily there are others to pick up the ball if I drop it. Another thought that I have implemented is



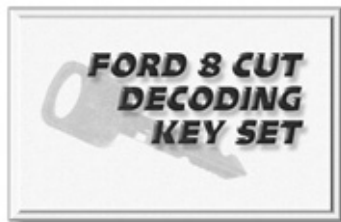
8. Repaired door with new Kaba-Mas lock installed.



7. Relocker pushed up and the door finally opened.

thanks to my friend Don Spenard in Seattle. I am using his line, a little modified. When a customer calls, I first tell them that I am good at what I do, I am expensive, and all my services are COD. If they are still willing to talk, so am I. Some people have called me a Prima Donna, but with age comes wisdom. I now choose the customers that I will do work for. Probably not good business sense, but I will never have an ulcer. Customer attitude is important as well as technician attitude. So Open, Smile, Collect your Money, and Prosper. **TNL**

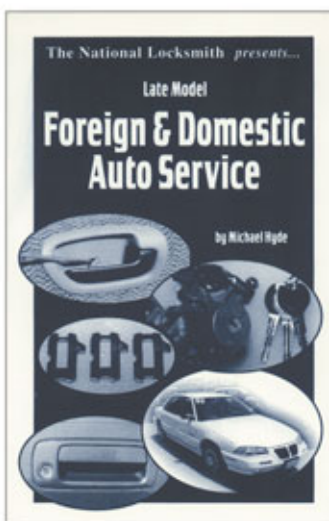
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#FD - 8

Foreign & Domestic Auto Service



This book represents the best work of Automotive Locksmithing guru Michael Hyde, author of the famous AutoSmart.

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#FDAS - 1

Road Rally

A showcase of locksmith service vehicles.

If you think your vehicle has what it takes to be featured here, send photographs and descriptions to:
The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861.



Owner:
Captain Lenny Grant,
Rahway, NJ
Model:
1997 Ford E-350
Powerstroke Turbo Diesel

Owner:
Alex V. Cartwright
Hoopeston, IL
Model: 1998 Ford
E-350 Econline



1999

MAZDA

626



by Tom Seroogy & Randy Mize

1. While servicing the Mazda 626 may not seem all that challenging, it becomes ever more important when generating a transponder key is part of the job.



OPENING:

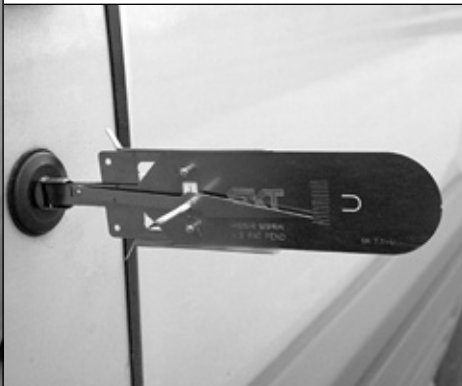


2. Opening the 626 is a fairly simple task. Insert a door wedge between the door and the window a few inches from the door handle towards the hinge side of the door.



3. Using a hook tool, grasp and raise the lock rod connected to the lock bell crank.

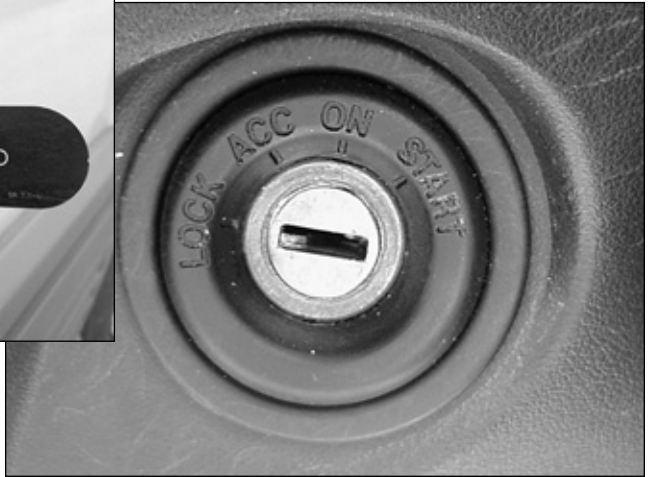
KEY GENERATION:



- 4.** Like door opening, key generation on the 626 is also easily accomplished. The easiest method involves using the Determinator or the SKT Wafer Reader to

read either door lock, then progression for the ignition to create the final key. Using these tools allows a key for the door lock to be generated without removing or disassembling the lock. If this method is not feasible, a key code can be found by removing the passenger door lock.

IGNITION LOCK:



- 5.** Like earlier Mazda models, the ignition lock is a single unit and must be removed in its entirety in order to service. Care should also be taken as the security system's transponder transceiver or antenna is actually a bezel that surrounds the face of the lock.

GM Steering Column Course

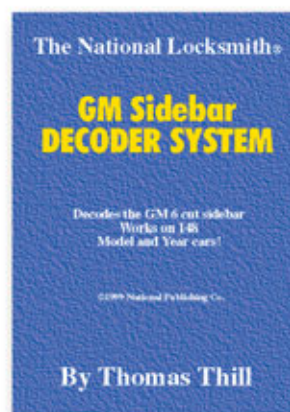


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#GM - 2

GM Sidebar Lock Decoder System



Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

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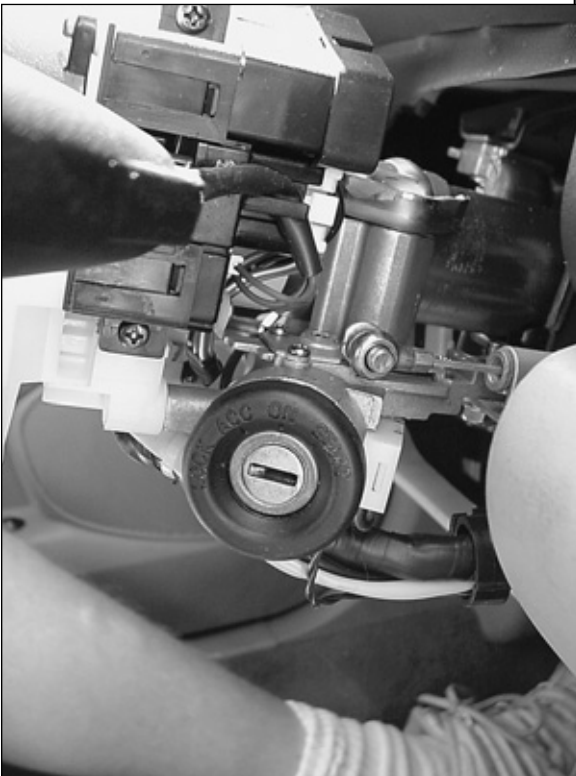
#TT - 1



6. To begin, it is first necessary to remove the two-piece shroud. Use a #2 Phillips screwdriver to remove the shroud mounting screws from the lower shroud.



7. Drop and remove the lower shroud.



8. Removing the upper shroud reveals the entire lock.



9. Before removing the lock housing, gently remove the transceiver from the face of the lock.

10. Moving to the top of the lock housing, locate the two breakaway bolts that hold the upper clamp to the lock housing body. In most cases, the screws can be backed out using a scratch awl and mallet. If this does not work, there is some room to cut slots into each screw using a Dremel or moto-tool. If all else fails, it will be necessary to drill the bolts for lock removal.



Continued on page 84

Continued from page 82

DOOR LOCK:



11. The door lock on the Mazda 626 is part of the door handle, requiring complete handle removal to access the lock.



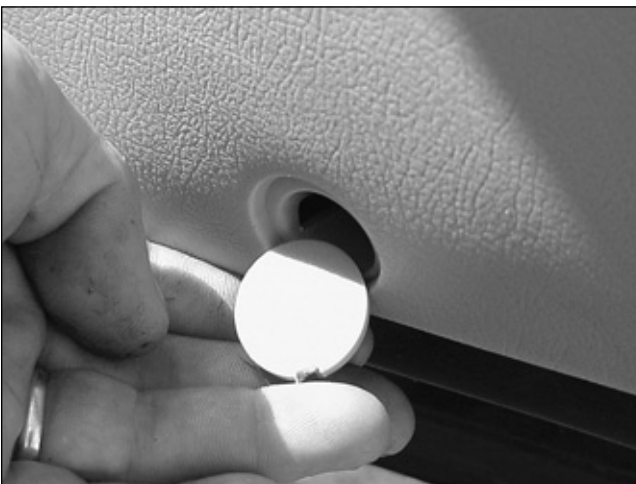
12. To remove the handle, the doors interior trim panel must first be removed. Like most Mazda's, there are no surprises as this is a common door panel.



13. Begin by lifting the small felt pad at the bottom of the armrest handle. This reveals a small Phillips head screw. Remove the screw.



14. Next, remove the small screw found behind the door latch release handle.



15. The various screws found around the perimeter of the panel.



16.

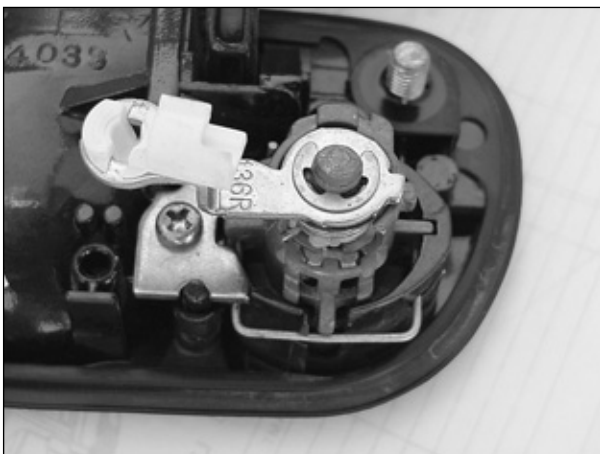
With all of the fasteners removed, use a trim panel tool to lift the door panel from the door.



17. Peel back the moisture barrier from handle area of the door and use a 10mm socket to remove the nuts that hold the handle to the door.



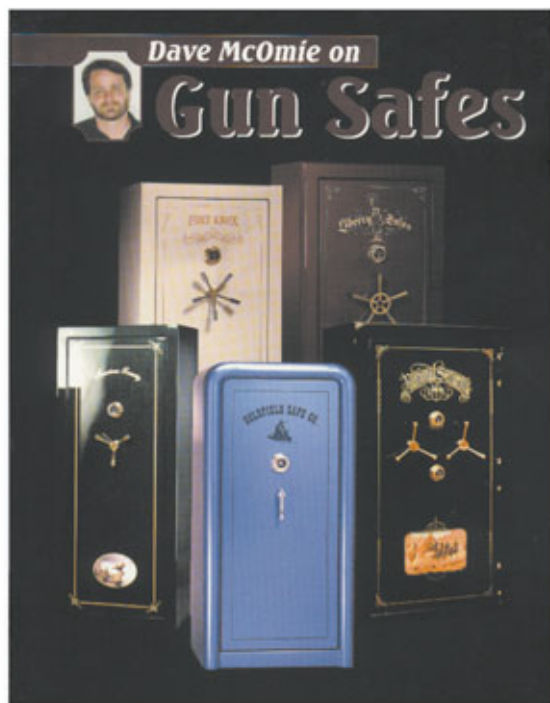
18. Carefully unsnap the door lock and door latch linkage rod clips from the door handle, and remove the entire handle.



19. With the handle removed from the door, slide the clip off of the lock and handle, and remove the lock.



20. A code is visible on the side of the passenger door lock.



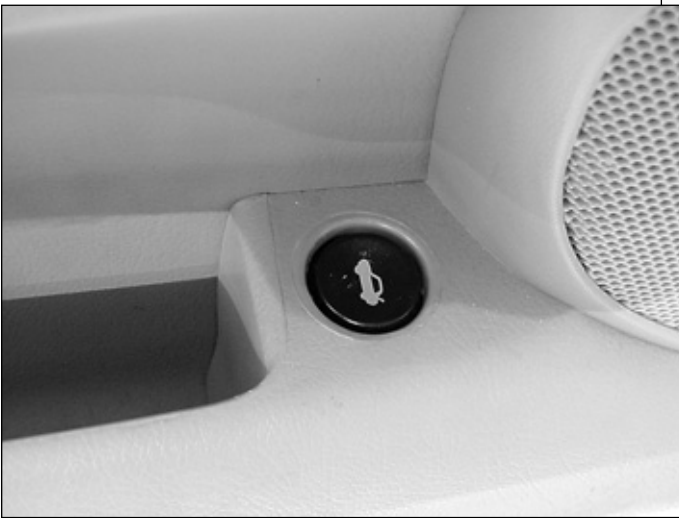
Gun Safes

Need a drill point or
relocker drill point on
a gun safe?

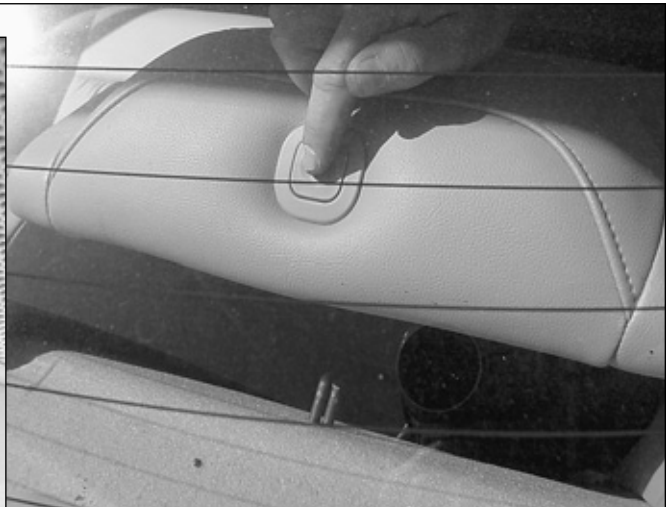
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#GS - 1

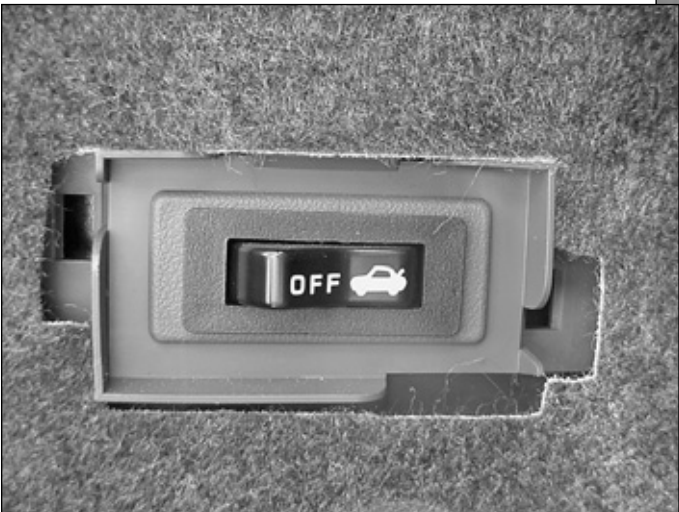
TRUNK LOCK:



21. Whether trying to access a set of keys or servicing the lock, Mazda has made access or opening the trunk on the 626 extremely user friendly. On this model, we found a trunk release button on the driver's door.



22. If this is not functional, or you prefer another means of access, lower the driver's side rear seat to gain access to the trunk area.



23. Attached to the side trim panel, another trunk release button is found. Depress either button to open the trunk.



24. The trunk lock is attached to the deck or trunk lid.



25. Despite the first impressions, the lock is actually sandwiched between the outside of the trunk lid and a plastic trim cover. To remove the lock, this trim cover must be removed first. Begin by removing the license plate. Two 10mm bolts and a small Phillips head screw will become visible.

Continued on page 88

Continued from page 86



26. Remove the bolts and screw.



27. Then gently pry the rest of the panel up from the deck lid.



28. The lock can be seen, attached to the back of the trunk lid.



29. Disconnect and remove the switch and cable from the back of the lock.



30.
Remove the bolts holding the lock to the trunk lid.



31. The trunk lock can now be removed.



32. Probably the biggest hurdle to generating a key for the 626 is working with its transponder security system. Fortunately, this task is easier to accomplish than one is left to believe. In short, the procedure requires a vehicle PIN number. This pin number is obtained from a Mazda dealer. In order to provide the PIN, the dealer will need the VIN number of the vehicle and the security module serial number. Fortunately, obtaining the module's serial number is pretty easy as it is printed on the label attached to the top of the module. By retrieving the module you have the serial number.

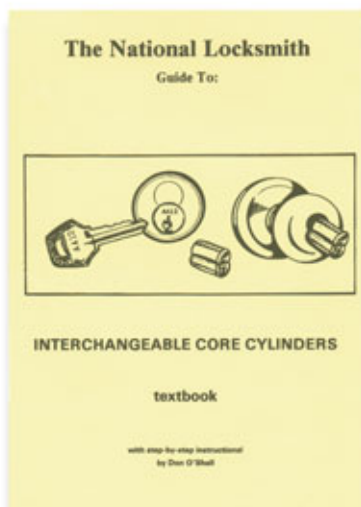
High Security Safes Volumes 1 & 2



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Interchangeable Core Cylinders



Covers all this...

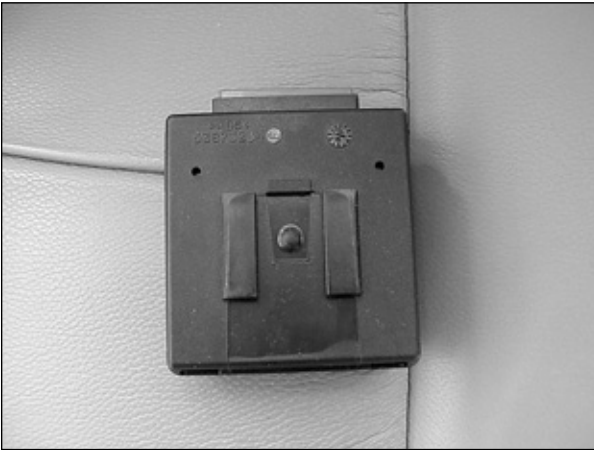
- Best/Falcon/Arrow/Eagle/(A2)
- Best A3
- Best A4
- Corbin X Removable Core
- Corbin Z Removable Core
- Russwin Removable Core
- Emhart System 70 Removable Core
- Sargent Removable Core
- Schlage, Yale, Lockwood
- Medeco Removable Core

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#ICB - 1

PROGRAMMING:



33. On this 626, the module is found bracketed to the underside of the knee bolster or hush panel.



34. The back of the module is formed for fitting onto a slide bracket that is mounted to the underside of the panel.



35.

Dropping or lowering the module is simply a matter of reaching up behind the hush panel, grabbing the module, and sliding it off of the bracket. With the module down,

the serial number can be retrieved for getting the PIN number. Needless to say, the biggest problem at this point is obtaining the PIN number. Developing a good relationship with your local Mazda dealer is definitely beneficial at this point. Even then, servicing this vehicle after hours, on holidays or during weekends may still not be possible. One option is to purchase and inventory a module for just such an occasion. The PIN number is an eight-digit number that will now be used to program the keys into the vehicle. Programming as expected is simple, although prone to user error.



36. To begin programming, take the eight-digit PIN number and a correctly cut, non-programmed transponder key. Insert the key into the ignition lock and cycle from the LOCK to the ON position 5 times. Then turn the key to the ON or RUN position. If done correctly, the security light will flash rapidly.



37. Within 20 seconds, turn back to the LOCK position and let the car sit. In about 5 minutes, the flashing of the security light will slow. It is at this time that the PIN number is used to program the key. While the security light is flashing, wait until the light is out and turn the key to the ON position. Let the security light flash the same number of times as the first digit in the PIN number. Turn the key to the LOCK position. Within 30 seconds, turn the key back to the ON position and repeat the last procedure using the second number of PIN number. Continue the ON to LOCK/PIN number procedure until all eight digits of the PIN number have been entered. If done correctly, the security light will stop flashing in the illuminated state. Turn the key to START and start the vehicle. The security light should go out within 2 seconds. To add more keys, turn the vehicle off, and within 20 seconds insert and start the vehicle with a duplicate key.

SPECIFICATIONS:

Key Blanks:

Original: Dealer Only

Boerkey: 1762000T51

Curtis: MZ22

Errebi: T02MZ23RP

Ilco: MAZ24RT5

Ilco EZ: MZ27

Jet: MAZ24-N-PHT

Orion: T51MA34L

Silca: MAZ20R

Codes: 10100 - 12283

Number of Cuts: 10

M.A.C.S.: 3

Key Gauged: Shoulder

Center of First Cut: .098

Cut to Cut Spacings: .083

Cut Depth Increments: .015

Spacing:

1 - .098

2 - .180

3 - .263

4 - .345

5 - .428

6 - .511

7 - .593

8 - .676

9 - .758

10 - .841

Depths:

1 = .315

2 = .299

3 = .284

4 = .268

5 = .252

HPC 1200CMB:

Code Card: XF68, CF68

Cutter: CW-1011

Jaw: A

Gauge From: Shoulder

HPC 1200PCH (Punch):

PCH Card:

Punch:

Jaw: A

Silca UnoCode

Card Number: 288

HPC CodeMax

DSD #: 253

Jaw: A

Cutter: CW-1011

Curtis:

Cam: MZ-5

Carriage: MZ-5A

Pak-A-Punch:

PAK-F6

Framon:

Cuts Start at: .098

Cut to Cut Spacing:

Block #: 5

Depth Increment: .015

Cutter: FC8445

Note: Use flip-up shoulder stop.

A-1 Pack-A-Punch

Quick Change Kit: PAK-MZ1

Punch: PKS-88T

Die: PKS-88T

ITL 9000 & 950

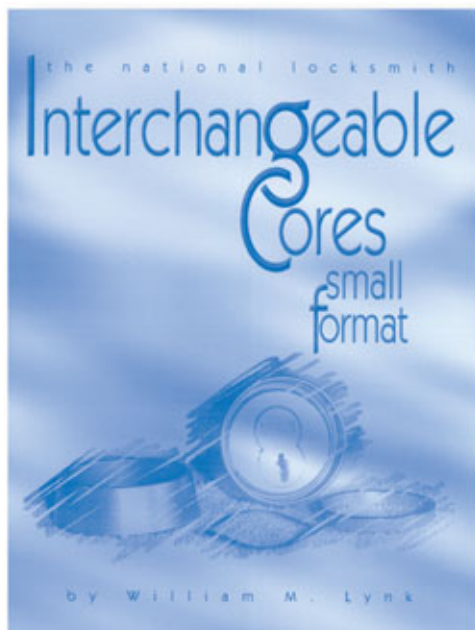
Manufacturer ID: 297

Ignition Lock: ASP - C-20-239 (automatic); ASP - C-20-238 (manual)

Door Lock: ASP - D-20-141

Key Kit: ASP - A-20-102

TNL



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about how to sell, service, install and
troubleshoot interchangeable cores!

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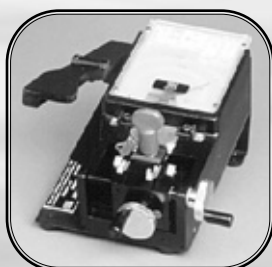
TECHNITTIPS

YEAR-END PRIZES



Grand Prize

Silca Bravo Duplicator



1st Prize

HPC's 1200PCH
Punch Machine



2nd Prize

Mas Hamilton's
PowerLever 2000



3rd Prize

Curtis 2200 Duplicator



4th Prize

SDC Magnetic Lock,
Keypad and Exit Switch



5th Prize

Securitron 12-Volt Unlatch Plug in
Trans & Touchpad Retail Value \$650



6th Prize

LaGard "SmartGard"



7th Prize

Detex Advantex



8th Prize

Arrow 400 Series Alarmed
Exit Device & S-75 Mounting
Plate Kit for Narrow Stile
Aluminum Doors



9th Prize

\$500 in BWD Products



10th Prize

\$500 in ASP Auto Locks



11th Prize

\$500 in Strattec Auto Products



12th Prize

Tech-Train "Jiffy Jack"



13th Prize

Sargent & Greenleaf 6120
Electronic Safe Lock



14th Prize

High Tech Tools
2000 Pro Set



15th Prize

Slide Lock's Master "Z" Tool Set



16th Prize

ESP Products Sampler



17th Prize

Major Manufacturing's
HIT-111 Drill Guide



18th Prize

Abus Padlock's Marine
Padlock Display (\$120 Retail)



19th Prize

MBA USA, Inc.
Falle Pick Set



20th Prize

Baxter JV-1 & JV-5
Code Books



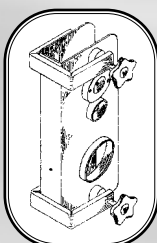
21st Prize

Sieveking Products
Squeeze Play



22nd Prize

Rodann's RV500 Wireless
Door Annunciator System



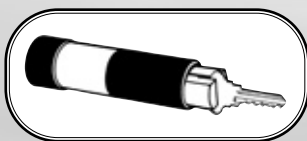
23rd Prize

A-1 Security Manufacturing
Installation Jig



24th Prize

Keedex Sampler



25th Prize

Framon
Impressioning
Handle



26th Prize

Gator Tool Multi-Purpose
Facecap Tool

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Key Extractor
Kit

• Strattec
Racing Jacket

• HPC Air
Wedge™

• Sargent And
Greenleaf
4400 Series Safe
Deposit Box
Lock

• A-1 Security
Products

• ILCO Key
Blanks (100
Blanks)

• Keedex "SPIN
OUT"
Screwdriver

• Tech Train
Training Video

• Sieveking
Products
Gm E-Z Wheel
Puller

• Major
Manufacturing
Products

• Slide Lock's
"Z" Tool
Opening Set

• The Sieveking
Auto Key Guide

• Jet Key Blanks
(100 Blanks)

• High Tech
Tools

• LaGard Combo
Guard

Send in your tips, and win!

How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,
The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107-1861

Or send your tips via
E-mail to: Natlock@aol.com

Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number and e-mail address. **When sending tips via e-mail make sure to include complete address and phone.**

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If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.

Tips Start
on Next Page



**JET KEY BLANKS
 WINNER:
 Medeco D-11
 Opening Trick**

I've come across a lost key situation on numerous occasions, where the only key for the Medeco D-11 deadbolt has been lost and access to the premises necessary.

I've developed a quick, drill-oriented method for opening these locks that is nearly as fast as drilling a standard deadbolt cylinder. This will even work on those deadbolts that have the shield on them to prevent an ice pick from manipulating the bolt.

Drill a 3/16" hole all the way through the keyway and out the

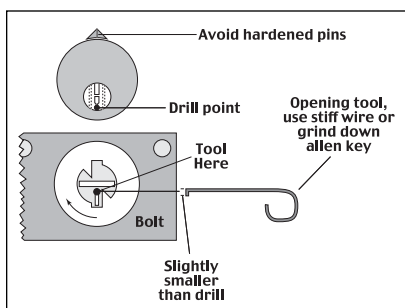


Illustration A.

back of the plug. (See illustration A.) That hole should exit the plug just below the tailpiece of the cylinder. If you use the key tip depression on the face of the plug as a guide for your drill point and drill your hole dead-on straight, you'll exit the plug just below the tailpiece.

Do not use a drill larger than 3/16" or you will shear or mutilate the tailpiece making it unusable. Also, keep in mind that a regular bit is sufficient, since this drill point keeps you away from all the hardened pins in the cylinder that protect the lock from normal drilling efforts.

After drilling the hole, use a stiff wire or modified Allen wrench to make a tool as shown in the illustration. Insert this tool through the drilled plug and hook it into the cutout in the tailpiece and turn to retract the bolt. That's it! It's quick and simple.

*Jack Tom
 New Jersey*



**WEDGEKO KEY
 EXTRACTOR WINNER:
 Alarm Lock Remote
 Release Tip**

I recently installed an Alarm Lock DL2700 lockset and an

A Few Words From Jake...

Lately, I've been watching the *The National Locksmith* and ClearStar forums, and there's been some discussion about accepting credit cards and how to get set up, how much it cost, and if it's worth it.

So, I did a little looking around (I could have said research) and came up with some information and some alternatives for those that might be interested in accepting credit cards. Especially the one-person mobile operations out there that find carrying a swipe machine and all the other stuff associated with credit cards a bit of a hassle.



**by Jake
 Jakubowski**

Here's my take on credit card acceptance and the various ways you can get into that phase of locksmithing.

First off: No matter who you pick up as a provider for your credit card services, it's going to cost you a percentage of your gross credit card receipts. Additionally, you may have to lease, buy or rent a swipe machine, pay fees for "call-ins" and purchase "supplies" from who ever it is that does your processing for you.

Consequently, the first decision you need to make is: "Do I have enough requests for credit card sales to justify the expense?" If you think you do, or you think you might, then the first suggestion that I have for you is to go down to the bank you do business with and ask them what they can do to help you set up a merchant's account.

Generally speaking, your local bank is the best place to deal with in order to set up a merchant's account. Unfortunately, some institutions frown on establishing merchant's accounts for businesses such as mobile service providers that do not have a storefront. Not all... but some. That means that there are some locksmiths that may not be able to secure a merchant's account through conventional, or established, outlets.

In the event that your local bank is reluctant to provide you with a merchant's account—don't worry; there are alternatives available to you. Those alternatives may be more expensive than mainstream institutions, but they are available and willing to help you set up to accept not only the major credit cards, but debit cards, ATM cards, checks and, if you have a web site, electronic checks.

One such company that I found, is National Bankcard Systems (1-800-550-7892) based in Austin, Texas. There are others and you can find them on the Internet or in various entrepreneur magazines. Of course, as in dealing with any service provider, you want to be sure you understand the rules before you get into the game.

Often alternative credit card processors have higher fees, non-cancelable equipment leases and monthly service fees that conventional providers may not have. For those that can't, or won't, deal with their local bank, companies such as NBS might be an acceptable alternative. Just read the fine print and make sure their plan is right for you. Also get on line and see what else is available to you.

Credit card transactions are becoming the accepted method of paying for goods and services. Governmental and state agencies often use credit cards for purchases. More and more corporations are following suit. Individuals are using credit cards at an unprecedented rate, and educational facilities are doing the same.

That means there are distinct financial advantages, and business opportunities, for the locksmith that does accept credit cards. One real advantage is the fact that if you accept a corporate, governmental or institutional credit card as payment of your invoice, the money is in your account in 24-to-48 hours rather than sixty-to-ninety days!

Not only can payment by credit card help you get more business, it can increase your cash flow, cut down on receivables and give you more credibility.

See y'all next month.

Aiphone intercom system. I tied the remote release on the DL2700 to the door release button on the Aiphone. Everything worked beautifully. Then, I started receiving calls from the customer telling me that the unit was re-setting itself to factory defaults.

I did multiple rechecks of the wiring, batteries, and actually replaced the DL2700 a couple of times. I disconnected the remote release wires at the lock and found the lock would function normally, as long as the remote release was not part of the system.

Then I bench tested the failed DL2700's, and found that the lock that had failed in the field (with the remote release activated) worked perfectly if the remote release was not incorporated into the system.

That led me to the conclusion that somehow the Aiphone was emitting RF signals that were being transmitted through the lock release wires causing the lock to malfunction.

To eliminate the problem, I installed ferrite RF chokes (suppressors) both in-line and over the door in an attempt to absorb any

signal that was being transmitted. Although this effort substantially reduced the problem—it did not eliminate it.

Finally, I pulled shielded cable for the two station Aiphone and ran a separate wire run for the release wires. That combination did the trick and the lock, as well as the remote release, is functioning properly.

The RF suppressors were purchased at Radio Shack (RS273-102 and RS273-104) for about \$25.00. Next time, We'll have some of those chokes handy when we install the T2 and remote release wires.

*Dan A. McNeil, CRL
Maryland*



**STRATTEC WINNER:
Roll Pin Stabilizer
Trick**

Many times it is necessary to remove roll pins from a lock to properly service that lock. As is the case with many foreign ignitions.

Such pin removal often means drilling a hole next to the roll pin and then prying, or lifting, the roll pin up, and out of the housing surrounding the ignition. Unfortunately, the roll

pins have a tendency to collapse when being pried, or punched, which makes them harder to remove and renders them unfit for reuse.

I always keep a couple of various sized paperclips handy so that when I work on one of these vehicles, I have a way to prevent the roll pins from collapsing. Simply insert a paper clip into the roll pin before you try to pry or punch it out of the housing. The paper clip will keep the roll pin from collapsing when you put pressure on it, in your efforts to remove it.

*Leonard Downing, CPL
Oregon*

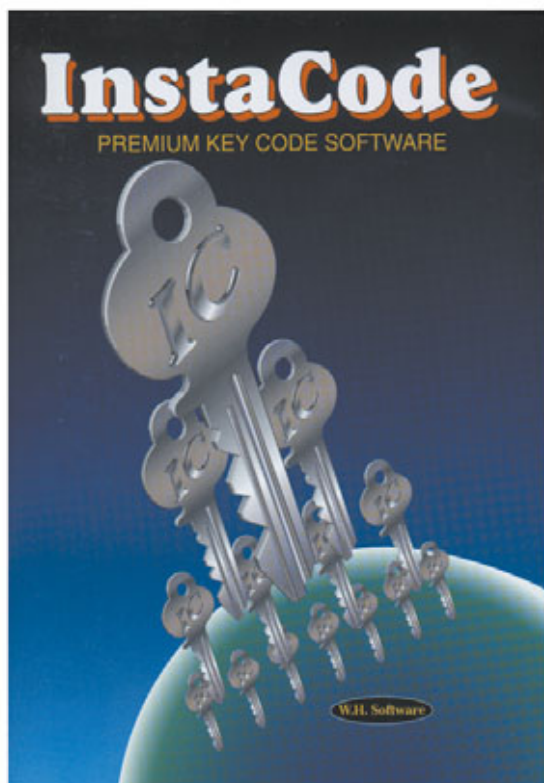


**HPC WINNER:
Show Case Ratchet
Lock Trick**

A restaurant had a wine cooler that it wanted secured to keep folks from helping themselves to the wine.

It was a double-sliding door cooler, like those used for sodas and milk in many convenience stores. The doors were about 1-1/2" thick, and slide independently of each other in opposite directions.

I figured that a hasp, hinge and



InstaCode

The latest release of InstaCode, includes over 5000 code series covering general/utility, padlock, vehicle and motorcycles.



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padlock would look rather tacky, and decided to see if I could modify one of my ratchet locks to work on the thicker door.

I straightened out the clip portion of the lock that normally slips over the glass on a display case door, and then put a single bend of 90° in the tang. I slid the tang between the two doors, secured it to the inner door with two 10-32 x 1/2" screws, and slipped the ratchet mechanism over the tang, after closing the doors.

It works like a charm.

*Dan Corner
Florida*



**SARGENT & GREENLEAF
WINNER:
Nose Pulling Tip**

It seems that safe deposit box lock parts are becoming more difficult to obtain. With the demise of Mosler and LeFebure, Diebold has—reportedly— been buying up all the surplus parts from the defunct companies.

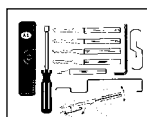
Here is a trick I learned from an old safeman years ago, that involves saving the noses when you pull them. I had forgot this tip because

with easy supplies, it was cheaper to simply replace the nose when I pulled them.

To salvage the old noses, I purchased a Snap-On Tilt Wheel Pivot Pin Puller. To use it, I drill a hole in the nose and tap to fit the puller's bolt. This allows me to extract the nose with little or no effort.

Then either braze the hole shut and polish it off... or insert a brass screw in the hole, grind off the excess and polish it off. I have now saved the nose and prepared it for reuse. Mostly, I have used this on older and rare boxes, but it will work on any of them.

*Glenn Phillips
Illinois*



**A-1 SECURITY
PRODUCTS WINNER:
Nifty Tension Tool**

I have found that those binder clips that are used for clipping papers together can make an excellent tension wrench for wafer locks. The clips are obtainable almost anywhere stationary products are sold.

For smaller tension tools, I use a

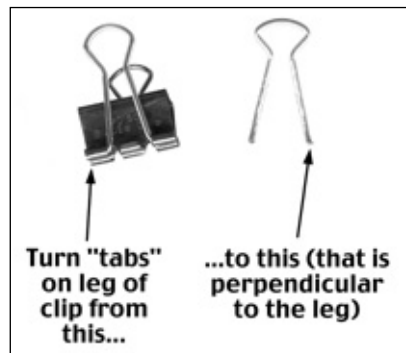


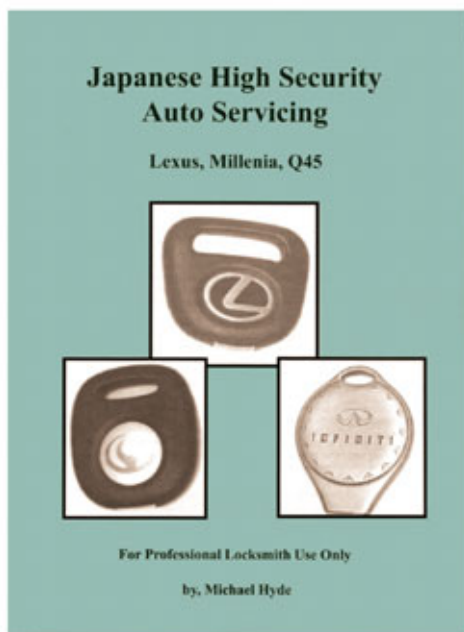
Illustration B.

3/4" binder clip and remove the tabs, or handles from the clip. Then use a pair of Vise-Grips to grip the legs of the tab, and use another pair of pliers to twist the short ends of the legs 90° as shown in *illustration B*.

These have become my favorite tension tool. They're simple to make, economical and hold on like a bulldog!

*Wade Bovender
North Carolina*

Editor's Note: Wade, I got to fooling around with the sample you sent me and found that it does, indeed, make an excellent tension tool for small wafer locks. I also used it to pick a couple of double-sided Chicago cabinet locks that



Japanese High Security

Some of the most profitable cars are also the trickiest to work on.

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I had laying around. Then I got an idea and found a bigger binder clip and used the tabs on that to make a tension wrench with which I picked a Ford 10-cut. I haven't tried it, but I imagine that you could also use it to good advantage on Ford 8-cuts and other vehicles with the wider keyways. A-1 Security Manufacturing makes a similar tool (for those who do not want to make one like you did). It's called the Adjustable Tension Wrench (Part # AMF-24,) and is available from most distributors.



**ILCO KEY BLANKS
WINNER:**

File and Tool Handle Tip

I had a box of files that did not have handles and found a way to make them for very little cost. Go to your local hardware store and purchase a 5/8" diameter wooden dowel and a length of plastic pipe which has an inside diameter of 5/8" and an outside diameter of about 7/8". The dowel should just fit inside the pipe.

Cut about 4" lengths of each and insert dowel in pipe. Drill a hole in the center of the end of the dowel and drive the file into the hole. This should secure the file and expand the dowel slightly to hold it in the PVC pipe.

For flat tools, cut a thin slot into the end of the dowel and force the tool into the slot before forcing the dowel into the pipe. Try this with the flat Kwikset cylinder removal tool so many of us use. Even those tough cylinders will pop out much easier than before.

While at the hardware store, pick up some clear, flexible plastic tubing that just fits over the end of those inexpensive flat steel picks you never use because they are uncomfortable to hold. You'll like the feel of those too.

Ted Swirsky

New Jersey

Editor's Note: Ted, thanks for the tip. I remember one that I've used. Find some old golf balls and force the end of the file into the golf ball. The golf ball fits the palm of your hand well and keeps you from losing your grip on the file.



**KEEDEX WINNER:
Key Duplication Trick**

There seem to be more and more keys coming down the line (Titan and GM for example) where the first cut from the shoulder is perpendicular to the plane of the key blade. (See *illustration C.*)

To replicate that cut, I had in the past, resorted to hand-filing that cut to conform to the original. I have an

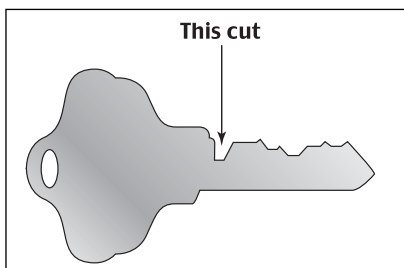


Illustration C.

old slotter machine that I use for the occasional bit/barrel key and decided to try using it to put that straight up-and-down cut on these keys.

I simply insert the key in the vise of the slotter and cut first position freehand. Makes the key look professional and it's easy to do.

*Howard Fulks
Oregon*



**WINNER:
Primus Bluff Tip**

A customer wanted keys that could not be duplicated, but of

course did not want to pay the cost of a restricted key system.

To minimize the chances that someone could duplicate his key, I rekeyed his Schlage "C" keyway locks to some discarded Schlage Primus keys that I had. It will keep someone from getting the keys duplicated at the hardware store.

Of course, if the key cutter or another locksmith recognizes the trick for what it is, they could easily dupe the key on a "C" blank.

*Larry Wright
South Carolina*



**SIEVEKING
PRODUCTS GM E-Z
WHEEL PULLER
WINNER:**

Geo Key Extraction Tip

A customer had somehow broken off the very tip of the key to her 1995 Geo Metro. This is how I extracted the key.

First I used a proper blank (uncut), broke the tip off approximately as far back as hers had broken (If the customer has the remainder of their key, you can use it for this next part) and inserted it into the ignition. This gets the tumblers out of the way.

Next, I threaded a spiral extractor down each side of the key, using the millings on the key to guide the extractors.

Then I clamped the key and the extractors together with Vise-Grips, placed as closely to the face of the ignition as I can get them. The key and the extractors should be virtually "welded" together by the Vise-Grips.

Then, I used a screwdriver handle between the housing and Vise-Grips and leveraged the key and extractors out of the ignition. The tip of the broken key came right along with them.

Cory Schmidt

How To Jumpstart Your Business

Anyone who's ever read anything that Jake Jakubowski has written is familiar with his style.



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#JUMPSTART



Minnesota

Editor's Note: Cory, thanks for bringing an effective means of removing key fragments from ignitions. The only caution I would add is when you use anything to pry against the ignition housing, you need to exercise due care not to put too much stress on the housing.

I have had good luck in the past by clamping the Vise-Grips parallel to the keyway (that is straight out from the keyway and pulling with both hands). Of course, success depends on how tightly you grip the tools and how much pull you can exert.

Major
LOCK MANUFACTURING, INC.

MAJOR
 MANUFACTURING
 PRODUCTS
 WINNER:
Plymouth

Voyager Code Tip

I recently had a call to originate a set of keys for a 1985 Plymouth Voyager. It had a 5-pin trunk and glove box, but no codes. Bob Sieveking's book suggests impressioning, or disassembling and reading the pins to make a key. I checked the hatch on the van and found that the lift back used the same key as the doors. I also found

that there was very easy access to the cylinder, so I decided to pull the hatch cylinder and I found a code stamped on the cylinder! I looked up the code and cut a key, which worked all the doors and the ignition.

I'm guessing that this might apply to the Dodge Caravan in the same year range (84-86).

As it turns out, the code is stamped on the side of the cylinder and can be easily seen if you have good eyes and a light. Which means you don't have to actually pull the cylinder to generate a key.

*Frank Kitchen
 Indiana*



**SLIDELOCK'S Z TOOL
 STARTER SET WINNER:
 Lettin' Folks Know
 Who You Are**

I have found what I believe to be an inexpensive, and yet, effective way of advertising.

I laminate some of my business cards between two sheets of plastic laminate (available in most hobby stores, and stationary stores) and use a standard hole punch to punch



Illustration D.

a hole in one corner of the card.

Next, I insert a give-away key ring in the hole as you can see in *illustration D.*

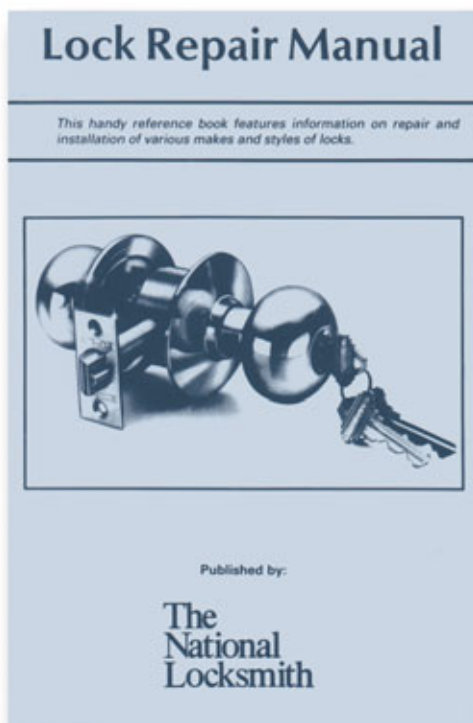
After that, anytime I perform a service for a customer (originate a key, dupe a key or make keys for their filing cabinet), I attach the keys to the key ring and card and give them to the customer.

Now they have a handy key holder that has my name and telephone number on it!

It's inexpensive, effective and the customers seem to appreciate it.

*Bruce Cole
 Washington*

TNL



Lock Repair Manual

Here, under one cover you have a tremendous amount of lock servicing information. Next time you run into a problem chances are you'll find the answer in the Lock Repair Manual.

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Unlocking the 2002

LEXUS

SC430

by Tony Vigil

Even in today's faltering economy, the sale of luxury toys does not seem to be slowing down in the least. The Lexus SC430 is one of those luxury vehicles that are selling like hotcakes. (See *photograph 1.*) This little car can not be considered anything except a toy, since it has very few practical features, though I must admit, driving this impractical little car was more fun than I'll ever admit. My wife was a bit unhappy at the extra attention I got from just about everyone on the road, especially the pretty girls.

This vehicle is unique in many ways, for one thing its part of the new breed of hard top convertibles. The unique mechanism takes a hard steel top and neatly folds it away with nothing more than the push of a button. (See *photograph 2.*) It also has a computerized voice navigation system and computer screen.

As might be expected, this vehicle has a lock mechanism that is entirely cable operated and completely shielded, making it impossible to use conventional in the door tools. The next obvious choice might be using an inside access type tool that goes down in the door and then back up on the other side. This is where another design element of the vehicle comes in. Convertibles have tighter seals around the windows to prevent rattles and squeaks. Trying to get one of these tools in this tight vehicle is difficult and dangerous.

The last option is a remote access type tool. This is a long rod that reaches into the vehicle from

Continued on page 102



Photograph 1.



Photograph 2.



Photograph 3.

Continued from page 00

Photograph 4.



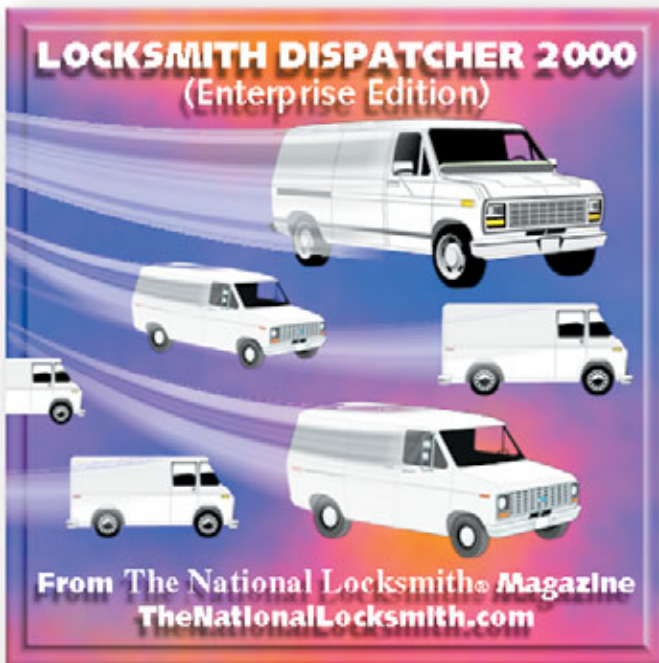
the outside. This is in fact the only reasonable way to get into this vehicle, though there is a potential problem. Since the vehicle has a hard top, the window is sealed quite tightly and the top holds the glass in place making inserting the tool difficult and possibly dangerous.

The solution to this is the High Tech Glass Master System. The Glass Master is a special wedge with accessories that allow you to spread the glass safely, so you can easily insert a long reach tool like the new flexible one piece long reach tool from High Tech.

The special wedge is really a multipiece assembly. With a high impact protector made from polycarbonate (the stuff bulletproof glass is made from) you can safely use a tool on this type of frameless door with ease and confidence.

Now lets look at unlocking this beauty. To start with we will insert a pair of strip savers between the glass and weather-stripping. (See photograph 3.) The strip savers provide a path for the wedge. The

Photograph 5.



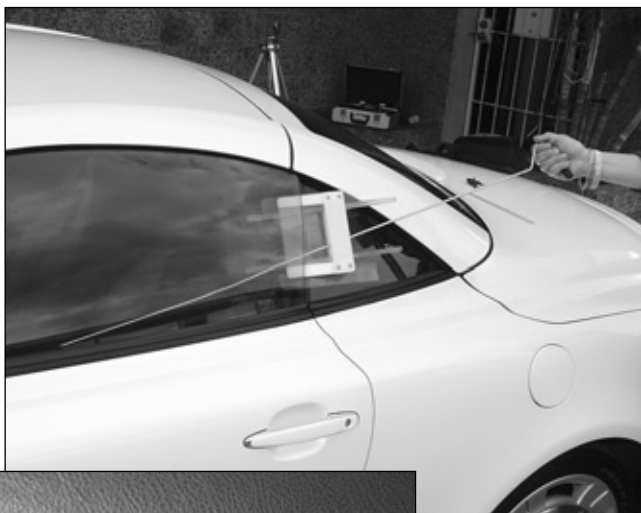
Locksmith Dispatcher 2000

Controlled Service
dispatching software
specifically for
the locksmith!

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Photograph 6.



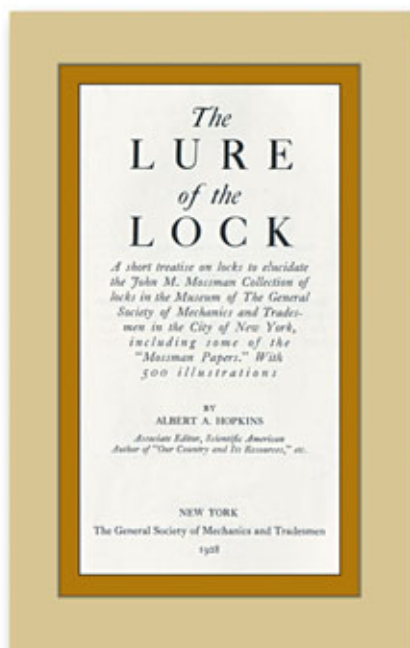
next step is to inset the wedge. This spreads the glass slightly and is quite easy to insert. (See photograph 4.)

Now that the wedge is inserted, the next step is to insert the spreaders. There are two of these and they do just what the name implies. The spreaders are designed to safely create a gap so you can insert the tool since both sides are protected by polycarbonate. (See photograph 5.) The spreaders are polycarbonate as well.

Next insert the opening tool. (See photograph 6.) You have plenty of room to work. Normally we would perform most openings from the passenger door, but in this case it is necessary to use the drivers door since pulling the drivers door handle unlocks the door while pulling the passenger handle does nothing. (See photograph 7.)

*Tony Vigil is President of High Tech Tools. For more information contact High Tech Tools at: 1400 SW 1 street, Miami, FL 33135. Phone: 800-323-8324; Web: www.hightechnetools.com. Circle 310 on Rapid Reply. **TNL***

Photograph 7.



The Lure of the Lock

This hardcover book, compiled in 1928, features dozens and dozens of beautiful photographs on ancient through modern locks.

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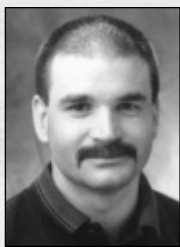


#LURE

TROUBLESHOOTING

Electronic Access Controls

PART 3



by
**William C.
Deutsch**

In my last article on troubleshooting, I talked about the “weird” problems - those special moments when your EAC system acts in a totally unpredictable, seemingly inexplicable way

- and told you these problems are usually in the hardware. Before we move on to solving software problems, I want to append a few more comments to that last article.

Power spikes and electro-static discharge (ESD) can turn your intelligent controller into a snivelling idiot. In my series of articles on Basic Electronics, I went into detail on protecting your equipment through grounding and surge protection. I won't repeat that material now, but here are two reminders: first, always use some form of surge suppressors. I like the Ditek DTK-1 for panels that use a plug in power supply. Second, if the circuit breaker that your EAC panel is on pops, PLEASE unplug the equipment before you turn the breaker back on. The surge from flipping that switch may be enough to fry a board all by itself. (By the way - these are the same practices you should use for any piece of electronic equipment, whether it's your home computer or your DVD player. So there is just another bit of

advice *gratis* from me and the nice folks at *The National Locksmith*.)

Now let's learn how to drive out the software demons.

When faced with an EAC problem, always ask the question, “Could I program the system to do this?” For example, suppose a door stays unlocked all the time. Is this normal? Yes. Normally you don't want to, but you can tell your system to leave any door open. Another example - can you program a system to deny access to every key holder? Of course! I'm not saying that's a good idea, but you could do it. When you are called in to deal with an issue like the ones I've just described, it's safe to assume the problem lies in the programming.

Photograph 1, shows the SiteLine® Intelligent Lockset™. This device incorporates a Grade 1 leverset as its locking hardware. The controller mounts on the inside of the door and has enough memory for 1200 keyholders and four access schedules. Most often, you would program this device to unlock for a valid key and then relock within 10 seconds.

But there are two ways to unlock the door and have it stay open for a loooong time. First of all, you can assign an “Unlock Privilege” to a particular key. With this privilege, the user can insert their key twice in succession and the leverset will remain in passage mode indefinitely. Repeating the action will relock it.

The unit can also follow an “Auto Unlock Schedule.” Auto Unlock is a first-man-in timer. When the first valid user unlocks the door, you can tell it to unlock for a specified period

of time. Let's say you wanted the front door of a shop remain open during normal business hours - but of course, you don't want the door opening until you are sure someone is in the building - you could set the Auto Unlock Schedule for 8 a.m. to 5 p.m.. The first valid keyholder after 8 a.m. would trigger the schedule and, presto, the door stays open until 5.

Now, back to our example. You've got an unlocked door, and the customer wants to know why. They are sure that “the danged thing is jammed open.”

Now that you're on the job, what's the first step of troubleshooting? Being prepared! You are prepared if you understand this lock and its functions. Because you already know two different ways to put the lock into passage mode, you suspect an



1. Medeco SiteLine® Intelligent Lockset™.

error in programming as opposed to a mechanical failure. Being prepared allows you to follow the second rule of troubleshooting — staying calm. Knowing that this may well be normal operation, you don't have to run around the shop screaming, Oh no! That new lock we installed just jammed open! Call the factory! Call the lawyers! Tear the stupid thing off the door!

Next, you need to get the facts. Here is the first question I would

ask? "Does anyone at your facility have an Unlock Privilege on his or her key?"

The answer will most likely be, "Of course. Everybody can unlock the door. But it's supposed to relock. Don't you understand what I'm telling you?!"

Hmm. The user doesn't have a firm grasp on the system capabilities, so a programming error seems even more likely now. How then, do you further eliminate the

possibilities? Here comes the most important piece of information I will give you in this article - use your audit report. Not only is an audit report an important security feature, it is also one of your best troubleshooting tools. Before you step into your van, ask this user to run that report and scan through the events that occurred around the time of the problem. Chances are, they will read something like

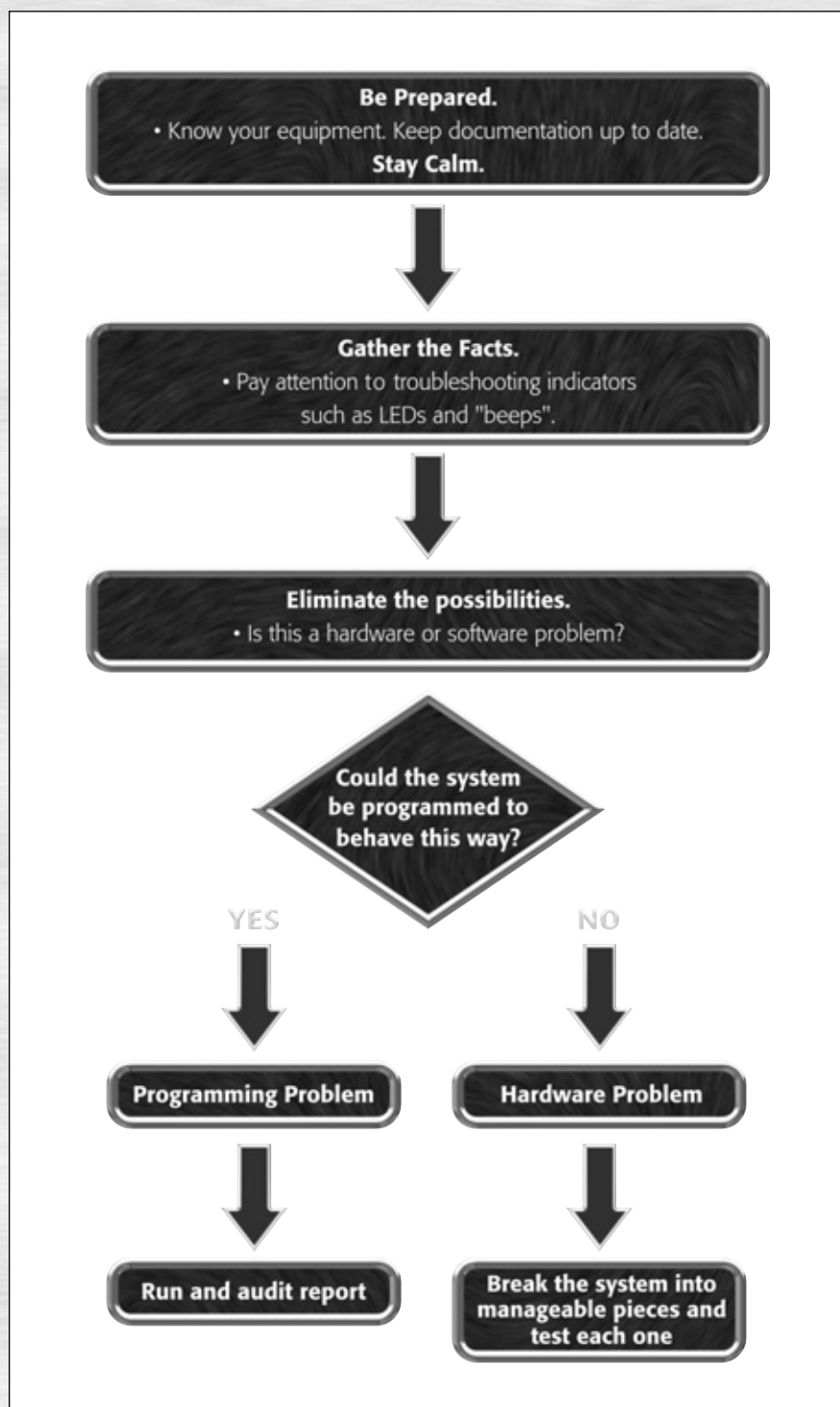
03/05/2002, 7:57AM SOUTH ENTRANCE UNLOCKED BY USER JOE SLOBOTNIK.

Problem solved! Mr. Slobotnik left the door unlocked, probably without realizing it. Solving this problem is easy, then. First, we find Joe (or anyone with the Unlock Privilege assigned to their key) and ask him to insert his key into the reader twice. The reader will then beep three times and relock.

But a programming problem is not solved until you've helped your customer to keep it from happening again. In this case, you will want to explain that an Unlock Privilege is very powerful, and should only be assigned to users who absolutely need it. If you can, take this privilege away from as many people as possible. Finally, make sure that everyone who needs the privilege has been properly trained. They will at least need to know how the lock responds when it is put into Unlock Mode so that they will not invoke this privilege by mistake.

It is possible that this same problem could have been caused by a hardware failure. But in your troubleshooting work it's best to pursue the simplest and most likely causes first. In this case, by being prepared, staying calm, getting the facts, and eliminating the possibilities, you were able to solve a problem without leaving your shop.

In closing out this series, I want to give you a flow chart that summarizes the steps I've laid out in these articles. (*See illustration A.*) The problems I've used as examples have been relatively simple. But once you master the process, even the giant problems will fall before your knowledge. The trick is to follow a systematic approach to troubleshooting until it becomes second nature.



A. Troubleshooting flow chart.

Open Forum



The Locksmith Forum at www.TheNationalLocksmith.com is the place to share opinions and ask questions of your fellow locksmiths. From time to time, we'll print themes of general interest in the magazine. The conversation goes on all day, every day. So stop in at TheNationalLocksmith.com and see what the fuss is about!

Q: Jim Snyder (rdrunner@sisp.net)

I'm considering getting set up to accept credit cards (M/C and Visa) and my local bank wants \$500.00 for the electronic equipment, \$300 for the card swipe and an additional \$200 for the cellular phone capability, which I believe I should have. There is no monthly fee, just 3% of each transaction. I don't believe I will have a lot of transactions, but I don't want to turn down any more jobs because of not accepting the cards. How about some info from those who accept cards, on prices, charges, etc.? Is there any less expensive equipment available? What about using a cell phone to get authorization at the job site?

Thanks for your help.

A: Jack Conn (lockshop6@aol.com)

I tell the customer up front that all services rendered will be paid with either cash or a Visa/MasterCard. A small percentage then asks if a check will suffice, my answer is NO. Experience has taught me if an adult, in this day and age, doesn't have a valid credit card, their check would be highly suspected.

The only equipment I've ever used for cards is a manual machine. It's low cost. I often hand print info from the card if I happen to be in a situation where the machine is not available. I've never had a problem.

Also, in the beginning I was mailed a bulletin monthly, in order to check the validity of a given card. I no longer receive or have to do any checks, as long

as the sale is less than \$50 and the card has not expired. Since the majority of emergency openings are in the \$35-\$50 range, it's no problem.

Unless you're ringing up a high number of credit card sales, forget the expensive equipment. When in doubt call the 800 number for approval.

A: John Robert (carlock@acum.com)

I have been taking all major credit cards, (Visa, MasterCard, Amex, Discover and Novus), for 5 years. I do between \$1100.00-\$1800.00 a month just in credit card sales. I stopped taking checks just about the same time I started taking plastic. I immediately stopped getting bad checks. When a customer does call in and it comes time to quote a price, I always ask, "Will you be paying with cash or a credit card?" When they say: "With a check," I simply say, "We do not accept personal checks, but if you have a check card with the Visa/MasterCard logo on it, we can take that."

After 5 years of not taking checks, I only lose about one customer for every 200 I provide a service for. So for me that is less than 1% of the customers I lose. However that figure represents my area and my business, your situation might be different.

With the ability to accept credit cards, you can also accept "Check Cards" that have the Visa/MasterCard emblem on them. So if you don't want to take checks, you can ask for their "Check Card." You will know in less than 30 seconds if there is any money in your customer's account to cover your invoice. This beats getting a bounced check some two weeks later, after you have already allocated those funds to pay for something else. Never wait until you get back to the shop to see

if the card will clear. When a customer hands me a card, I immediately run it. I would rather it be declined in front of the customer than after their gone.

Even if your start up is \$2000, which it isn't, you would pass that company expense to your customers, by increasing your prices by about \$5-\$10 dollars per service call. As an example, let's say your lockout fee is currently \$30. You would increase your openings to \$35. As time passes on, your company expense is absorbed through your sales. Also, because of this added expense, you will need to be more persistent when it comes to up selling to your customers.

A: Nate (463lock@netscape.net)

I didn't get involved with MC, VISA or Discover, its too costly and I don't get enough requests for payment by credit card. We did sign up with AMEX, with a manual swipe. It costs us a small percentage and a \$.65 fee for the check and maybe a \$.95 fee to check the card. You must call an 800 # for each transaction. I've used it only a few times a year.

We're strictly mobile, so people don't typically ask about charges. If they do, I tell them we accept American Express only. Most people then ask if we'll accept their personal check. We do.

I like using AMEX, because facilities maintenance companies may have an AMEX Corporate Card and can pay us as soon as the call is taken, rather than waiting 60 to 120 days for payment. I am asking for AMEX payment by all of those types of companies we take service calls for. I'm going to start to ask the safe manufacturers for AMEX payment on warranty calls too.

My only concern is the issue of the new Check Cards. I think people will stop buying checks and want to use their check card instead. We may be forced into subscribing to a service then.



A: Robert Sierra (sierra123@lightspeed.net)

Here's a piece of wisdom; check cards are nothing but fancy ATM cards. Not long ago I was working in a Texaco station for a friend. I instructed all the cashiers that when presented with a "check card" to process it as an ATM card, not Visa or MC. You see, the difference is that you can make the customer pay the processing fees for an ATM, but not with a credit card. If the customer specifically asked that it be run as a Visa/MC, then that was fine, but otherwise let them pay for their convenience.

A: Chris Gonzales (Gnzleslock@aol.com)

Be very careful and shop around! Avoid CardService International! Don't do an equipment lease on the credit card terminal. Read and understand the contract! It basically says, "We have you over a barrel and will do anything we want," including zapping your account and changing the terms of the contract! Don't keep all of your funds in this account. You should have another account for most of your operating expenses.

A: Jerry C. (securelock@webtv.net)

Like most have suggested, do some shopping around. I received offers from several credit card companies to set me up, to the tune of several hundred dollars. I told them thanks, but no thanks.

I found another small business in town that used a swipe machine, asked them which bank they used for their credit card account, and went to that bank. Told them I wanted to take credit cards, but just wanted the most basic package they had. They set me up with

a mini-swipe machine (not much bigger than a pack of cigs), and an 800 number to call each time I take a card. The whole thing cost less than \$50.

I take Visa/MC and call the 800 numbers and the money's in the bank. Of course, I pay a percentage for each transaction I do.

Some have warned about the problems of "charge-backs." I've never had one come back, not saying it will never happen, but I do get bad checks occasionally and will take a credit card over a check any day.

As for the percentages charged per transaction, the written agreement I have with the credit card company says I can't charge more to cover those charges. I could raise my prices across the board, but I'm comfortable with my prices. So I just eat the percentage charge each time

I do a transaction. Figuring 95% of a job in my pocket, is better than 0% of a job I didn't get, because I wouldn't take their credit card.

A: Bobby (keyman101@worldnet.att.net)

The 3% transaction fee is high and should be no more than 1-3/4%. Check into offers from Sam's Club or Costco. That said, I stopped taking credit cards because I just have a mobile unit and was not getting enough credit card calls to support it. I found that most people will pay by check or cash, if you tell them you do not accept credit cards. When I first applied for merchant credit card, I thought the bank rep was very honest when she said, "be sure to get all the correct information on the slip". If the charge comes back for any reason, the bank will try to get it back from you, before they eat the charge!

A: Robert (sierra123@lightspeed.net)

First thing you have to do is figure out how many dollars your going to process with it. Then shop around, try an Internet search for "merchant services + Visa" or similar. Rates and fees vary radically, but the bottom line is, the more you process, the lower the rates. You have to consider the buy/rent/lease options for any equipment. Most newer equipment is software driven and can be

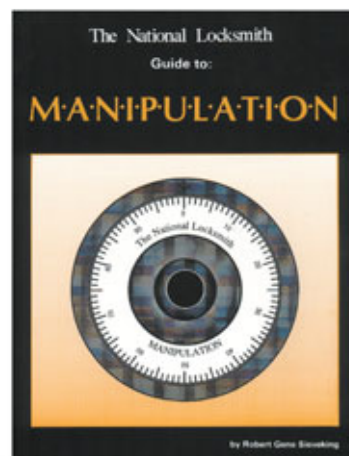
easily reprogrammed. But also keep in mind that the Mag Reader heads are fragile and in a mobile setup might need regular repair/replacement.

If your using it a lot, then it might be better to pay a slightly higher percentage, with no per transaction fee. If you're

only doing one or two transactions per week, then perhaps you're better off with a .30-cent transaction fee. A good salesperson will run the numbers with you.

You might want to check out a salesman that approached me last week, the company name is Lynk, the customer service number is (800) 859-5965, and ask for a sales rep in your area. The guy offered a \$50 referral for anyone I send his way, so after you negotiate any deal, tell the guy to give you the \$50 off. He said there was no "set-up" fee's, but a monthly equipment fee, percentage, but no per transaction. This should not be considered a recommendation in any way, I don't know him or the company. But he did say they "specialized" in mobile equipment.

Manipulation Home Study Course



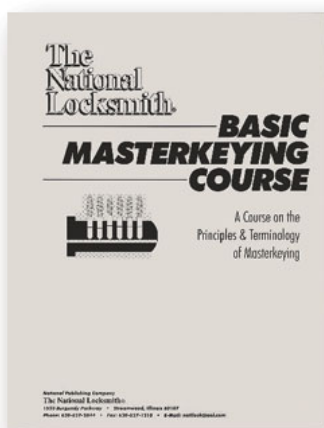
Our
home
study
course guides
you on
step-by-step
process,
teaching
you
everything
there is
to know
about
manipulation.

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#MAN - 1

Basic Masterkeying Course



13 Lesson
450 page course

The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

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#MK - 1

A: Richard (suisunlock@aol.com)

My experiences with Lynk has been horrid. When I first started my business 3-1/2 years ago, I had trouble finding anyone to accept me for MOBILE charges at that time. The contract has weasel words in it that have allowed them to increase fees several times, such as new processing fees, increased discount rates and last month an "annual assessment fee of \$20.00." This fee was never adequately explained to me on the phone, other than their increased cost of doing business. It costs a minimum of \$20.00 a month, without any charges and rises if you do charge. Also, I had to make numerous calls, one at a time in the beginning, to add on the services I had signed up for on the contract, Big 4 credit companies and ATM.

The Visa charges worked, but later when out on the job, I found out I was not signed up for M/C, Discover, AMEX or ATM. Had to call Lynk to activate some, others I had to apply directly to get added. It took me 4 months to get and keep the ATM function working. Lynk set me up with Golden Eagle Credit, which I lease my electronic processor from. Cost \$77.58 a month, of which \$7.58 a month is on mandatory insurance, that I have had two insurance companies send repeated endorsements to cover this charge. (This reminds me to do it again and get nasty with Golden Eagle).

Since then I've heard that Costco sells processors pretty cheap. I do love the ability to run charges electronically in seconds from my van and that the funds are in my bank in a few days. It also cuts down on bad checks taken, but I regret the cost and problems I have had. One last thing is when I got the processor, at first the Lynk rep. stated that it was compatible with my cell phone. I later found I had to buy a \$120.00 data interface. I have since bought another cell phone and found that it has to have an analog mode and of course a new \$150.00 data interface.

Shop around and good luck.

A: Wayne Stockall (droopy@tctc.com)

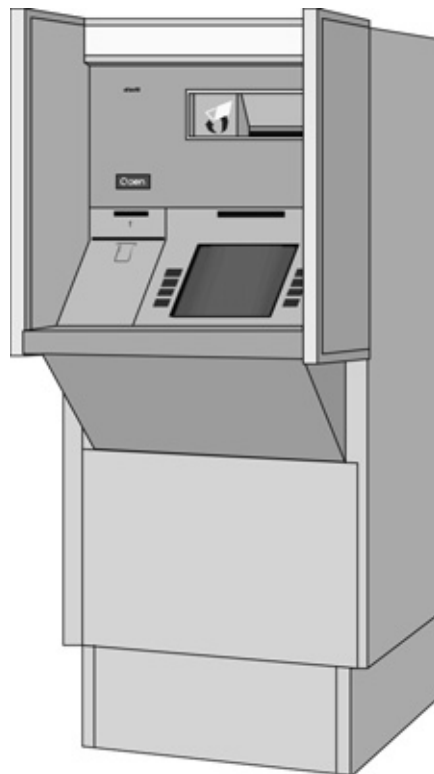
I have two major accounts that pay only with credit cards, so I was forced into it. I'm sure a lot of companies are going this route. I actually purchased my terminal and printer from an auction. My local bank set up an account for me free and charges me 1-3/4% for each or a minimum of \$10.00 per month, if I don't use it at all. My cost is low and the advantages are

high. A lot of car openings and residential work want to "card" now and pay later, so I feel more work was done because I take cards.

You might check with a business whose selling out or check auctions (maybe E-bay.com). Anyway, check around.

A: Bill (clinique@shore.intercom.net)

Credit cards are fine and useful but not a necessity. If I had to pay \$500 for the reader, plus 3% for transaction fees, I would not get it. All the reasons given are valid and the other options will work; ATM, check, etc. There are



problems with credit cards besides the cost, a big one being charge backs. The bank usually takes the side of the customer in disputes.

A: Garth Meredith (merlock@connect.ab.ca)

I have had M/C and Visa for 20 years, and have switched several times from bank to bank to get better rates. It's amazing what a bit of haggling with a M/C or Visa rep. will produce. I use a manual imprinter in the truck (supplied free by the bank) and an InstaLink device in the office. This gadget hooks to my phone line. (This was also supplied, gratis, by the M/C bank).

When I bring a manually prepared card in to the office, I input the information into the InstaLink, which gives me an authorization number, and

then balances all transactions at the end of the day (again electronically). Then I hit the deposit function on the machine and it deposits the funds to your account(s) the next day. The plate with my M/C and Visa numbers which is screwed to the manual imprinter costs me \$1.25 per month and the transaction fee for the electronic service is .15-cents each for Visa and .05-cents for M/C. Don't ask me why the difference, only the Bank knows. But I couldn't get Visa to come down below .15-cents. This is in Canada where Visa is handled by one set of banks and M/C by another, and there is no bank that handles both.

I highly recommend that you start accepting credit cards for the reasons some of the other fellows listed. I will NOT go out on an after-hours car open-up call, without getting a credit card number over the phone (unless it's a current customer). I then get an authorization for the amount of the call on the InstaLink machine. If it's good, I go. If not, so sad, too bad. I'm not in the charity business.

A: Dennis (dennis@qualmonsys.com)

We use an online account over the Internet. Don't do many. Usually only 3-4 max per day. But, usually around \$400-500 per charge. This works out very well. Immediate transfer of funds to my bank. No equipment to buy.

Go to www.authorize.net to get the info directly.

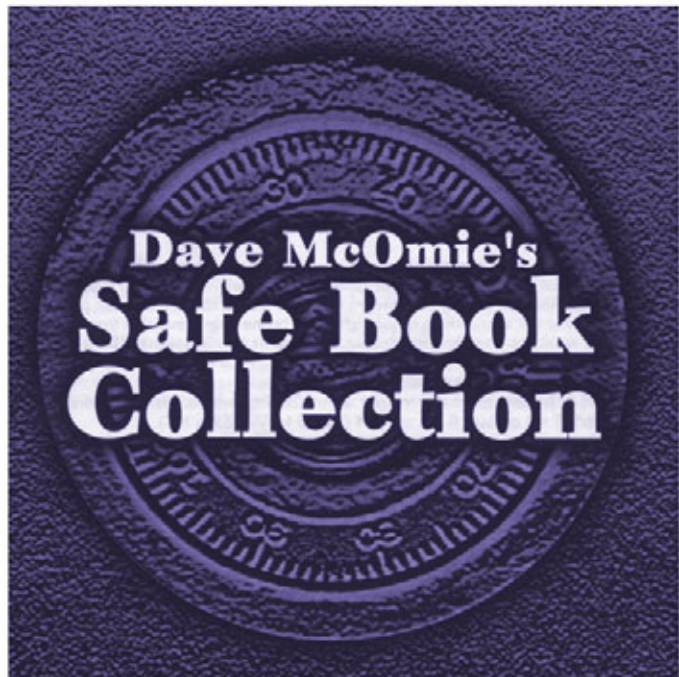
A: rvlocksmith (simons66@flash.net)

Check with your bank. I too, almost got had and I've heard people tell me they lease. Boy are they getting had. I use a swipe here in the shop, total cost \$150.00 new and if you want, you can divide it into 2 or 3 payments. I already had a manual printer, but it cost \$25 for the tag that inserts in it, so set up fee was \$175.00. It cost me .65-cents for approval and 3% of sales at the end of the month. Cards are 1/3 of my total sales. Military base and larger companies use them for bookkeeping. If I did not take them, I would be a poorer man than I am now.

A: Robert (Sierra 123)
(sierra123@lightspeed.net)

I know of a small café, adjacent to a gift shop, that when the cafe has a customer with plastic, they run it through the gift shop credit card

Dave McOmie Safe Book Collection on CD



This CD contains every book Dave has ever published.

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#DMCD - 1

machine. The gift shop then gives the cafe cash, minus an unmarked up percentage.

Is it illegal? Does it violate the merchant agreement? Probably. But since the merchant has the burden of proof in any dispute and the processing company can always get their money back, I doubt they really care, as long as it doesn't result in frequent charge backs or other problems.

On a side note, you may want to shop around for a better rate. 3% seems a bit high, if your doing more than \$3500 a month in plastic.

A: Wynn Kessler (wynner5@ix.netcom.com)

When you process a credit card through another business and get cash, that is called Factoring. In most States Factoring is illegal and could cause the Factor to lose his credit card privileges or, if prosecuted, to lose his business. Check with an attorney before they put you out of business. It could happen.

A: Good ole boy (keymaker@tecinfo.com)

I have taken credit and debit cards since they first came out. I cannot imagine operating my business without them. The only bad checks we get are auto openings, so we don't take checks anymore for any after-hours calls. Many of our corporate customers are using cards and we welcome them. Saves a lot of billing expense and improves cash flow. I have had a problem with scam companies trying to sell me supplies for my credit card machines. These supplies are free from your credit card server, so why pay for them.

A: Jeremy Helmich (jeremy.helmich@GTE.NET)

I've been taking cards for quite a while now. I use a Novus (which is Discover) Card Reader, which they allowed me to make payments of \$17 a month or I could have purchased it all at once. The Reader is at my shop. You get a processing fee only if you call in for approval, rather than at the Reader. When a customer gives me a card, I use a hand machine in my van, have them sign it on the forms provided free from Novus and process it when I get back to the shop. If it happens to be declined, so what, I will get my money eventually by continuing to try to process the card. You may think this sounds dumb to do it this way, but it only cost me a \$17 a month to take cards. It's better than bad checks, because you can try to process it as many times as you want. It's rare that I get declined cards, compared to the numbers that are approved anyway.

A: Chris Gonzales (Gnzleslock@aol.com)

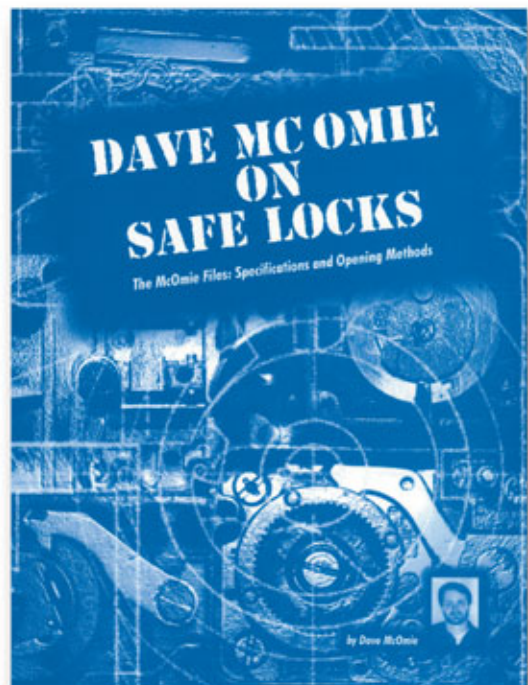
Attention everybody! Avoid CardService International, this is a very greedy company who doesn't care about the little guy.

A: Ray Hearn, Hearn Safe & Vault

St Louis MO (ray.hearn@slacc.com)

I signed up with Union Planters bank and they set me up with a swipe terminal for under \$100. Don't get into that trap of giving a third party a huge profit for getting set up for credit cards. **TRN**

Dave McOmie on Safe Locks



Almost 300 pages of information, photographs and illustrations give you every scrap of information about a huge variety of safe locks.

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#DMSL - 1

BUSINESS BRIEFS

A-1 Web Site

A new web site is up and running for A-1 Security Manufacturing Corporation. The site, demanda1.com, features A-1's entire line of locksmith products, including the Pak-A-Punch, I/C tools, automotive tools, installation tools, specialty tools and tubular lock tools. The web site also contains a page called "Highlights", which shows what current promotions are available.

CCL Acquires The Big Tag®

CCL Security Products, a Division of The Eastern Company, has announced the acquisition of The Big Tag®, a Division of Dolan Enterprises of New York. CCL Security Products manufactures PRESTOLOCK, keyless combination padlocks, which are sold in luggage shops throughout the country.

PRESTOLOCK, is also offered with customized labeling, being sold in the premium and advertising specialty markets. The Big Tag, is sold through the same markets and distribution channels.

For additional information or a sample, contact Deborah White at (860) 229-6199, ext. 128. Circle 311 on Rapid Reply.

Adams Rite Acquires New Companies

Adams Rite Manufacturing Company has acquired Markar Products, Inc., Extrudart Products Inc., and Rockford Products, Inc.

Markar Architectural Products, Inc. will operate as a wholly-owned subsidiary of Adams Rite Manufacturing Co. Kevin Hamilton, former president of the acquired companies, will become president of the

newly formed subsidiary, reporting to Dick Kreidel.

Security Lock Distributors Stocks HandReaders

HandReaders, an extraordinary advance in access control technology, provides security, accuracy, speed and convenience for a wide range of uses. It absolutely identifies a person through instant recognition of the size and shape of that person's hand. Made by Recognition Systems, an IR company, HandReaders feature unparalleled accuracy and reliability, fast enrollment and use and easy integration with existing systems. They also prevent "buddy punching", guaranteeing that the person entering is the actual person and not someone carrying another's card.



For further information, call (800) 847-5625; Fax: (800) 847-6400; E-mail: info@seclock.com. Circle 312 on Rapid Reply.

Dugmore & Duncan Opens Texas Branch

Dugmore & Duncan has opened a new stocking warehouse in Austin, Texas. The new warehouse joins locations in Massachusetts, California, Florida and Illinois. The new location, at 4401 Freidrich Lane, has over 6,000 square feet of

space. The company, which specializes in the sale of Sargent products, has also expanded its outside sales team. Dugmore & Duncan's technicians can be reached toll-free at: (888) 384-6673. In addition to Sargent, the company is also a stocking distributor of McKinney, Securitron, hes and IEI products.

Strategic Partnership

ESSEX Industries, Inc. and SafeSchool Solutions announce a strategic partnership that brings together the country's largest supplier of doorway security products and America's leading safety solutions provider. The two companies are joining forces to advance "Building Security", a program initiated by ESSEX that focuses on helping school administrators develop a comprehensive security program, that merges the use of security products, with policies and procedures.

Visit ESSEX web site at: www.essexopenings.com, or SafeSchool Solutions web site at: www.safeschoolsolution.com.

Alternative to Mechanical Pushbutton Locks

Access Hardware Supply offers a superior alternative with Schlage's PRO Series programmable locks. These stand-alone, battery-operated locks use microprocessors to program up to 120 user codes, right at the lock. The Schlage PRO Series locks are ruggedly designed to meet ANSI/BHMA Grade 1 standards. They utilize a TorqDefender feature, which allows the lever to swing freely in a break-in or vandalism attempt, while the lock remains secure.



The PRO Series locks are UL listed for fire doors and will last two to three years, or 80,000 activation's, before the "AA" batteries need replacing.

For more information call: (800) 348-2263. Circle 313 on Rapid Reply.

Builders Hardware New Standards

The Builders Hardware Manufacturers Association (BHMA) announced a new ANSI/BHMA A156.20 American National Standard for Exit Locks, Exit Locks with Exit Alarms, Exit Alarms, and Alarms for Exit Devices for the safety and security of building occupants. Also new is the ANSI/BHMA A156.31 American National Standard for Electric Strikes and Frame Mounted Actuators, setting performance requirements for key hardware components of electrically-activated security systems.

For more information visit the web site at: www.buildershardware.com. Purchased standards are available as printed documents or as electronic files (PDF), for immediate downloading from the web site. You can also order standards by phone at: (800) 699-9277. Circle 314 on Rapid Reply. **TNI**

1998 KAWASAKI ZX9R Ninja

by
John
Blankenship



1. The ZX9R is a fast, good handling, and popular sport bike. There are no codes on the bike, but originating a key is not difficult.



Gas Cap:



2. This view from the drivers seat shows the ignition lock at the top/center of the photograph, and the gas cap lock at the bottom/center.

3. Reading the wafers in the gas cap lock with an otoscope is a good way to get the cuts for spaces 3-7.

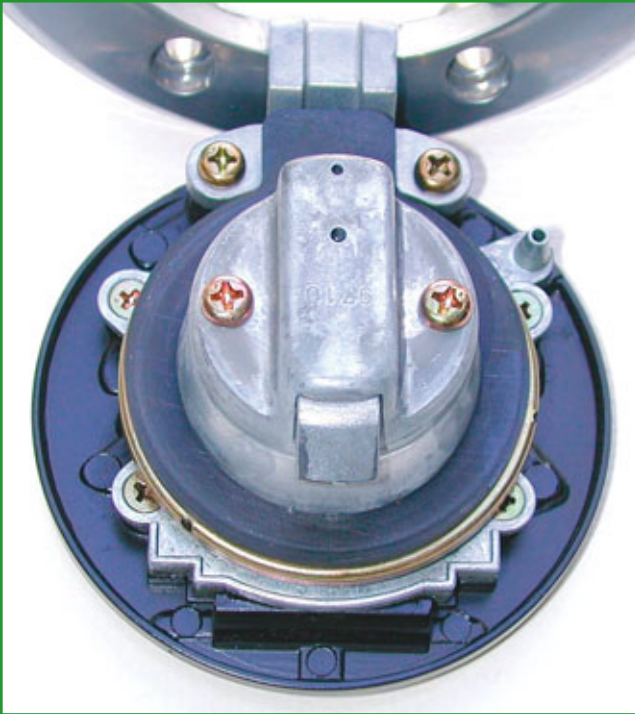
Disassembly is also a good way. Begin by picking the lock 90 degrees clockwise. Have a small screwdriver ready to finish turning it, because you are picking against spring pressure. In the photograph, the lock has been picked and the spring has turned the plug back partway. Use a 4mm hex key to remove the seven bolts that secure the mounting ring to the gas tank. Then remove one Phillips screw that is hidden under the gas cap. You can

now take the gas cap assembly to a bench. Make sure you do not lose the small rubber gasket that can fall out of the mounting ring.

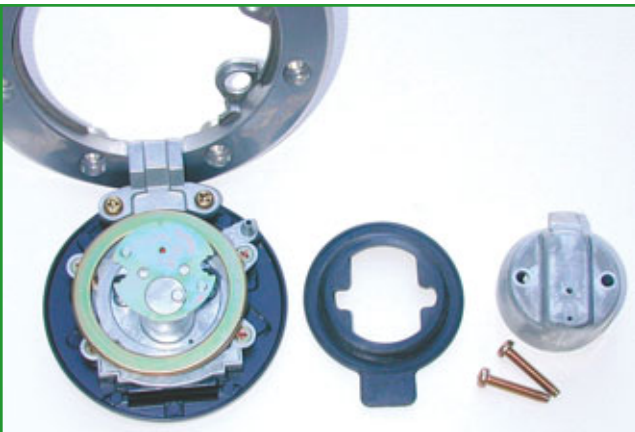


Continued on page 128

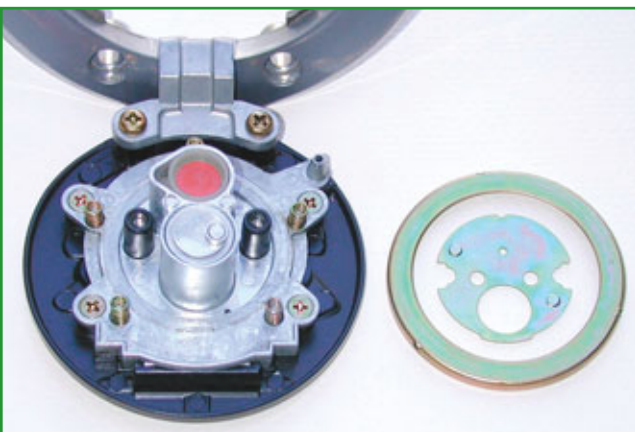
Continued from page 128



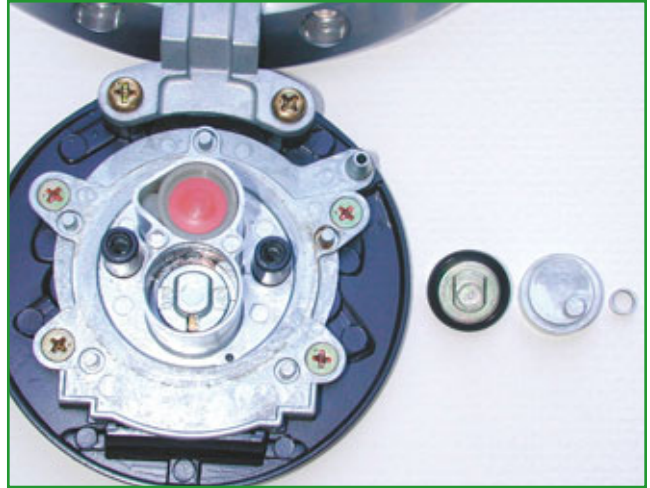
4. Remove the two Phillips screws from the bolt housing. The number stamped on the bolt housing is not the code.



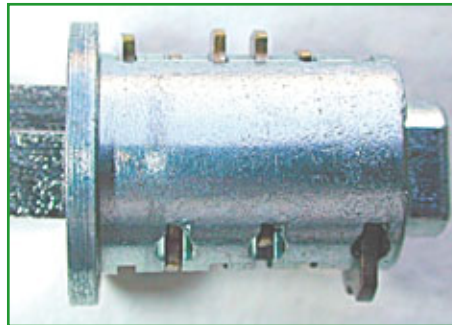
5. The bolt housing and gasket have been removed.



6. The backing plate and compression ring have been removed. Remove the five compression springs and put them where they won't get lost.



7. The outer tailpiece has been removed and placed on the right. The tiny bushing is shown removed from the outer tailpiece; be careful not to lose it. The inner tailpiece with the O-ring was then removed and placed on the left. Now you can see the wafer retainer at the 12 o'clock position on the rear of the plug. Depress it and push the plug out the front of the cylinder. Be careful and do not allow any wafers to fall out.



8. A KW15BP blank inserted into the keyway shows that the cuts for spaces 3-7 are 31442. A search using code software revealed that there are only four codes

that use those cuts in the last five spaces. You can also progress or read the seat lock to obtain the first two cuts.

Seat Lock: _____



9. The seat lock is located in the rear fairing just in front of the left rear turn signal.

Continued on page 130

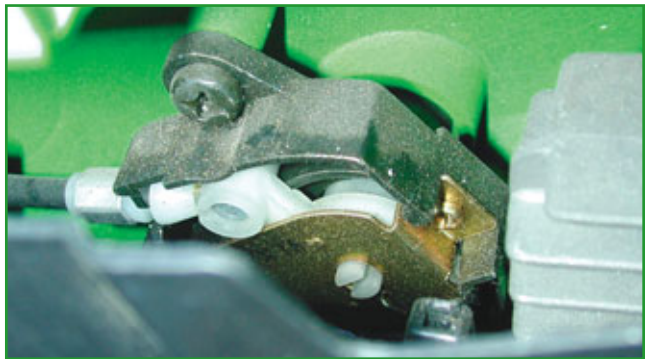
Continued from page 128

10. The seat lock contains wafer tumblers in spaces 1-3. The tumblers are all on the same side of the keyway, so it is a good lock to use for reading or progression to determine the depths for spaces 1-2.

Turning the plug 45 degrees counter-clockwise against spring pressure releases the seat latch located below the back of the seat. You need to pull the back of the seat up before you allow the spring to return the plug to the locked position. Then pull the seat to the rear and remove it.

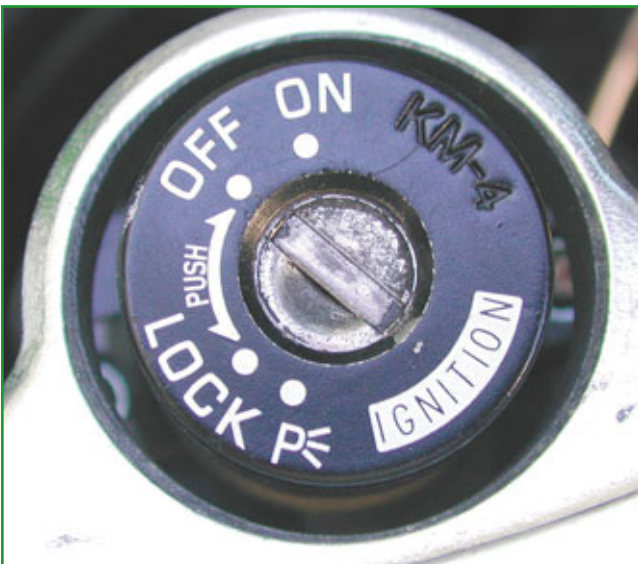


11. The first two cuts turned out to be 32. A code cut KW15BP with cuts of 3231442 works all three locks on the motorcycle. A reverse search using code software shows that the code is B8066.

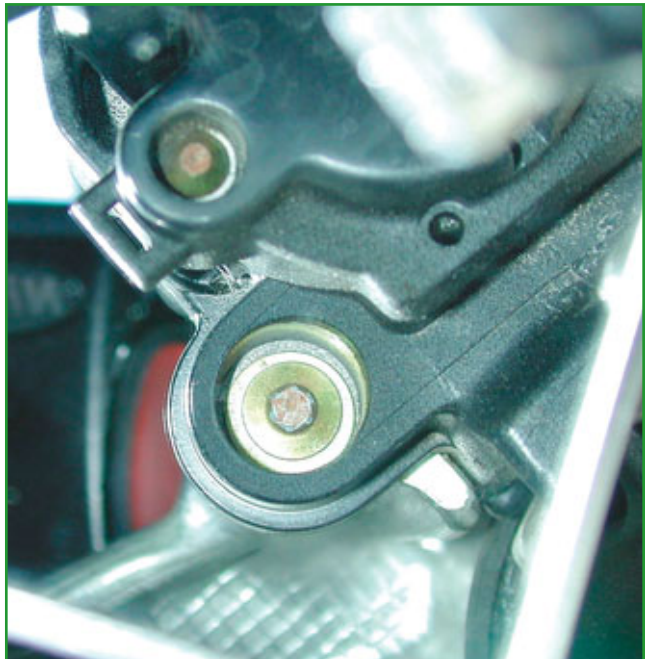


12. The seat lock is held onto the inside of the rear fairing by Phillips screws. It is necessary to remove the rear fairing if you need to remove the lock.

Ignition Lock:



13. The ignition/steering lock contains wafer tumblers in spaces 1-7. Also, the pre-cut tip on the KW15BP raises an 8th wafer, but you do not have to be concerned about it when cutting the key. The lock is shown in the OFF position. The plug needs to be pushed in before it can be turned to the LOCK position and then pushed in again to turn it back to the OFF position. The "P" position turns on the taillight so you can be seen at night. Also, the steering has to be turned all the way to the left or right before you can turn it to the LOCK position and extend the steering lock bolt.



14. I used a mirror to take this photograph of the shearhead bolts. The large shearhead bolt is one of two that secure the ignition lock. The small shearhead bolt is one of two that secure the switch to the back of the lock. I did not remove the ignition lock.



15. This photograph shows one of two small shearhead bolts (blurry) that secure the face cap to the lock. After the facecap is removed, the plug needs to be in the OFF position before it can be pulled out of the cylinder.

Specifications

Codes: B8001-B9000

Blank: Ilco: KW15BP, Curtis: KA19, Silca: KW15BP

Spacing: 1=.315, 2=.413, 3=.512, 4=.610, 5=.709, 6=.807, 7=.906

Depths: 1=.296, 2=.276, 3=.256, 4=.237

Card: None

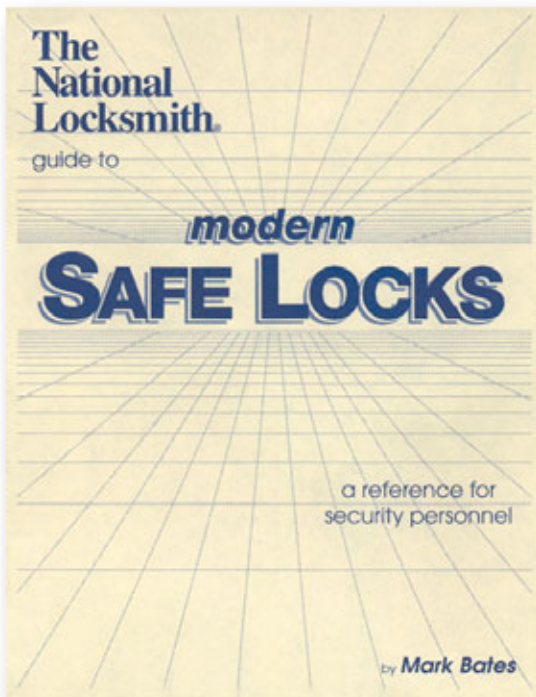
ITL: None

Curtis: KA-1 cam & KA-1C carriage

Note: Some sources show incorrect information for these 7-cut codes. I believe the reason that there are no card or ITL numbers for the B8001-B9000 codes is because they already had them for the 8001-9000 Kawasaki 7-cut codes, and did not realize that the spacing had changed. HPC users can use card CMC51 and add the 7th cut toward the tip. ITL users can create a custom ID table as described in the operations manual or use a computer to send the information from correct code software.

Tumbler Locations:	1	2	3	4	5	6	7
Ignition	x	x	x	x	x	x	x
Gas Cap			x	x	x	x	x
Seat	x	x	x				

ITL



Modern Safe Locks

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FREE Code Cards!

from The National Locksmith®

COLLECT 'EM ALL!!

Spaces		Depths		Cutter: CW-1011		IC #: 903	
mm	Inch	mm	Inch	Jaw: A	Series	Original	
1	2150	846	2	855	337	50000-69999	
2	2010	791	1	820	323		
3	1800	709	3	690	272		
4	1660	654	4	625	246		
5	1450	571					
6	1310	516					
7	1100	433					
8	960	378					
9	750	295					
10	610	240					

Align: Black horse shoe tip stop

For the exclusive use of the registered purchaser of InstaCode named below.
Duplication or distribution of this material to anyone other than the registered purchaser is prohibited by law.

The National Locksmith®

Key Blank Mfr. Blank #
Silca TOY43AT4

Toyota 50001-69999

InstaCode

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WH Software

Cut Along Outside of Card and Laminate To Use

Spaces		Depths		Punch		IC #: P903	
mm	Inch	mm	Inch	Jaw: A	Series	Original	
1	2150	846	2	855	337	50000-69999	
2	2010	791	1	820	323		
3	1800	709	3	690	272		
4	1660	654	4	625	246		
5	1450	571					
6	1310	516					
7	1100	433					
8	960	378					
9	750	295					
10	610	240					

Align: Tip stop (Left Insertion)

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The National Locksmith®

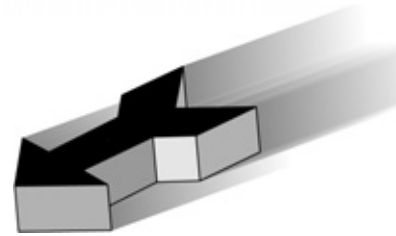
Key Blank Mfr. Blank #
Silca TOY43AT4

Insert key such that face of jaw meets key profile

Toyota 50001-69999

InstaCode

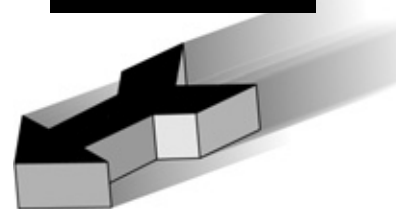
Copyright 1994 - 2001
WH Software



BONUS Code Card

For the 1200CMB™

Flip 'em over for
Silca,
Curtis,
Framon,
A-1
and
ITL specs!



Code Card

For the 1200PCH™

Courtesy of
INSTA-CODE 2002™ from
The National Locksmith

Toyota 50001-69999

HPC 1200CMB™

HPC: N/A Cutter: CW-1011
Vice: A

Silca Unocode

UnoCode Card No.: 1420
Vice/Adapter V100 Standard

HPC Codemax™

DSD: N/A
Jaw: A
Cutter: 1011

Curtis

Cam Set: N/A
Carriage: N/A
Clipper: N/A

Framon

Cuts Start At: 404 Cutter: N/A
Spacing: .0551 / .0826 Alternating
Block #: N/A Depth Increment: .0255
Key Clamping: Key aligned using left side of vice

A-1 Pak-A-Punch™

Quick Change Kit: N/A
Punch And Die: N/A

ITL

ITL Manufacturer ID: N/A

Toyota 50001-69999

HPC 1200PCH™

HPC: N/A Punch: N/A
Jaw: N/A

Silca Unocode

UnoCode Card No.: 1420
Vice/Adapter V100 Standard

HPC Codemax™

DSD: N/A
Jaw: A
Cutter: 1011

Curtis

Cam Set: N/A
Carriage: N/A
Clipper: N/A

Framon

Cuts Start At: 404 Cutter: N/A
Spacing: .0551 / .0826 Alternating
Block #: N/A Depth Increment: .0255
Key Clamping: Key aligned using left side of vice

A-1 Pak-A-Punch™

Quick Change Kit: N/A
Punch And Die: N/A

ITL

ITL Manufacturer ID: N/A

KEY CODES

Toyota, Part 4 50001-69999

Manufacturer: Toyota
Code Series: 50001 - 69999

Key Blanks:

Silca: TOY43AT4

Number of Cuts: 10

M.A.C.S.: 2

Key Gauged: Tip

Cut to Cut Spacings:

.0551/.0826 Alternating

Cut Depth Increments: .0255

Spacings (Framon):

1 - .404

2 - .459

3 - .541

4 - .596

5 - .679

6 - .734

7 - .816

8 - .871

9 - .954

10 - 1.009

Depths:

1 = .325

2 = .299

3 = .274

4 = .248

HPC 1200CMB

Code Card: N/A

Jaw: A

Cutter: CW-1011

Gauge From: Tip

HPC 1200PCH (Punch):

PCH Card: N/A

Punch: N/A

Jaw: A

Silca UnoCode

Card Number: 1420

HPC CodeMax

DSD #: N/A

Jaw: A

Cutter: CW-1011

Curtis No. 15 Code Cutter

Cam-Set: N/A

Carriage: N/A

Framon #2

Cuts Start at: .404

Cut to Cut Spacing:

.0551/.0826 Alternating

Block #: N/A

Depth Increments: .0255

Cutter: N/A

Key Clamping Info: Key aligned
using left side of vise/spacing
clip.

A-1 Pack-A-Punch

Quick Change Kit: N/A

Punch: N/A

Die: N/A

ITL 9000 & 950

Manufacturer ID: N/A

ECM 200

N/A



59791	2243222311	59834	2243122344	59877	2134434312	59920	1234342332	59963	1234443244	60006	3334342134
59792	3243222133	59835	3243122334	59878	3434433423	59921	3433344423	59964	3234344434	60007	2334342133
59793	3343222121	59836	3443122321	59879	2334433422	59922	1233344312	59965	2134344344	60008	2234342132
59794	3443221132	59837	2243122312	59880	2134433421	59923	2233343421	59966	3332444344	60009	2134342123
59795	2243213444	59838	3243122244	59881	3434433312	59924	3433342312	59967	2232443444	60010	1234342122
59796	3243213423	59839	3443122234	59882	2234433311	59925	1233342311	59968	2243433343	60011	1134342121
59797	3443213421	59840	1243122232	59883	1234433244	59926	2233342134	59969	1234433233	60012	4334342111
59798	2243213344	59841	2343122133	59884	3234433232	59927	3433342121	59970	2234343334	60013	3434334423
59799	3243213244	59842	3343122123	59885	2234433221	59928	1233324423	59971	1234343233	60014	2334334312
59800	3443213232	59843	3443122121	59886	1234432312	59929	2233323444	59972	2234333423	60015	2134333444
59801	2243212344	59844	2243122112	59887	3434432243	59930	3433323421	59973	1234333232	60016	1134333422
59802	3243212312	59845	3243121243	59888	3234432134	59931	1233323244	59974	2234233343	60017	3434333244
59803	3443212244	59846	3443121232	59889	2134432133	59932	2233322312	59975	1233434343	60018	2334333221
59804	2243212243	59847	2243121221	59890	1134432132	59933	3433322244	59976	2233433344	60019	2134332312
59805	3243212134	59848	3243121132	59891	3334432121	59934	1233322243	59977	1233433311	60020	1134332311
59806	3443212132	59849	3443113443	59892	2334432112	59935	2233322134	59978	2233432133	60021	3434332134
59807	2243212121	59850	2243113434	59893	2134431243	59936	3433322121	59979	1233343434	60022	2334332132
59808	3243211243	59851	3243113423	59894	1134431132	59937	1233321243	59980	2233343243	60023	2234332122
59809	3443211134	59852	3443113421	59895	3334434423	59938	2344434423	59981	1233342133	60024	2134332121
59810	2243211132	59853	2243113344	59896	2334344422	59939	2344434312	59982	2233323423	60025	1234332112
59811	3243124434	59854	2343113312	59897	2134344421	59940	2344433423	59983	1233323312	60026	4334331132
59812	3443124423	59855	3343113243	59898	3434344334	59941	2344433421	59984	2233322334	60027	3334324423
59813	2243124422	59856	1243113232	59899	2234344332	59942	2344433312	59985	1233323434	60028	2334323434
59814	3243124344	59857	2343112334	59900	1134344323	59943	2344433244	59986	2233233423	60029	2234324312
59815	3443124334	59858	3343112311	59901	3334344321	59944	2344433232	59987	1233233312	60030	2134323444
59816	1243124333	59859	1243112244	59902	2334344312	59945	2344432344	59988	2233232133	60031	1134323434
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Modern Safe Opening

This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

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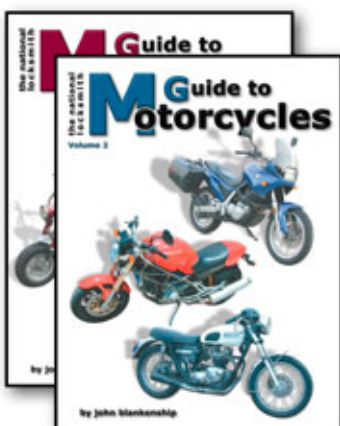
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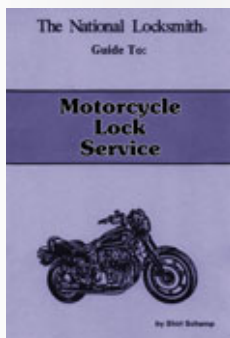
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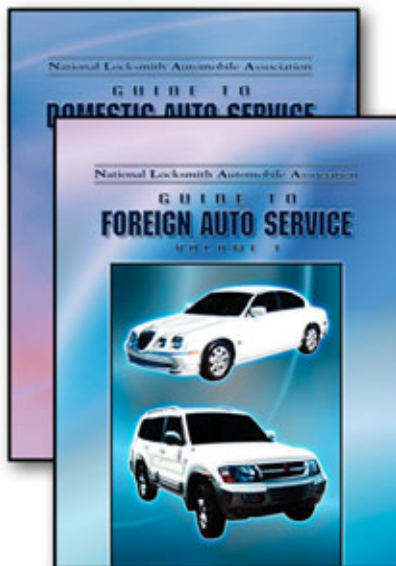
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TL

NLAA Guide to Domestic Auto Service

NLAA Guide to Foreign Auto Service



You get car opening, lock removal and service, column service, key and code series information, and many views of the doors, panels and locks.

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THRU THE KEYHOLE

ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Editor, Greg Mango, at (630) 837-2044.

Locksmith Olympics and Flea Market

The North Jersey Master Locksmith Association will be hosting it's 7th annual Locksmith Flea Market and Locksmith Olympics, on June 2nd, 2002 from 9am.-2pm. It will be held at the Quality Inn in Lyndhurst, N.J., Rt.3 and Rt.17 intersection. Phone: (201) 933-9800. There is easy access from the Newark airport and all major highways. Medieval Times is directly across the street for family entertainment.

The Locksmith Olympics and Flea Market were conceived by Jeff Sitar, 7 time World Champion safe manipulator. All proceeds from the event are given to the Special Olympics charity. All Locksmiths are encouraged to contribute and participate.

Special appearances by:

Jake Jakubowski - Technical Editor for the National Locksmith, conducting a "Tips & Tricks Seminar."

Tom Lynch - Lockmasters Representative, conducting hands on use of the LYNCH-IT and several other products.

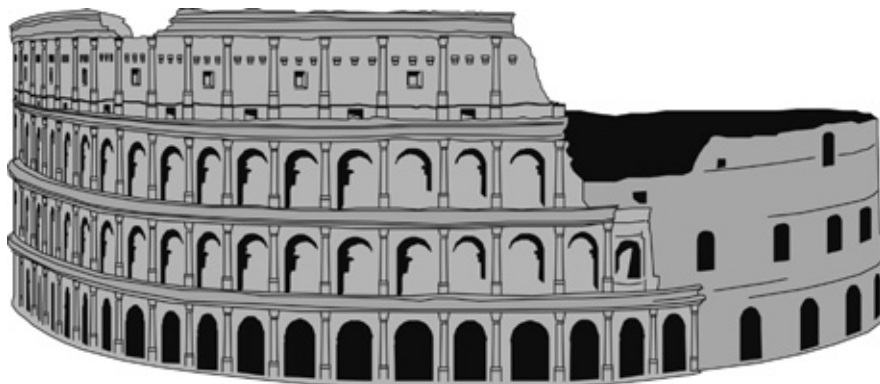
Jeff Sitar - 7 time World Champion safe manipulator answering your questions and demonstrating his skills! Also offering Sentry Safe opening techniques for beginners.

Peter Sarailian - ALOA Northeast Director, to address all your ALOA concerns and membership applications.

Randy Mize - Automotive expert and transponder authority to share operating methods for transponder technology, and automotive secrets.

Frank Markisello - Owner of Aable Locksmith, to answer all you questions on his innovative products.

Many more industry leaders will be there for you to benefit from. These people are dedicating their time for the benefit of those in need.



The Special Olympics symbolize the importance of being "My brothers keeper" and the North Jersey Master Locksmith Association personifies this by their efforts and their fellowship. Be a part of it!

There will be outstanding raffle giveaways. Items contributed include some of the following:

New Deadbolt, by Mul-T-Lock USA

Johnny Latch, by Jake Jakubowski

The LYNCH-IT, by Tom Lynch

FLIP PICK for BMW, by Lockmasters

Quickout, by Frank Markisello

FREE Pure Auto Class, by Lockmasters

Fifteen Minute Safe Opening Book, by Jake Jakubowski

10-years of TNL on Disc, by The National Locksmith

Sentry Safe Opening Tool, by Saber Tech Tools

And there will by much, much more!

All of the people who have contributed their time and their products are honorable people who believe in the charity and purpose of this event. This is a fun event, which is informal and based upon the mission statement of the North Jersey Locksmith Association, which is "Fellowship." If your company would

like to contribute to this event, feel free to do so. Interested parties can contact: Nick Hart of Petes Lock in Fort Lee, New Jersey at: 201-944-7547; or e-mail Tom Lynch at: lynserve@aol.com. **TNL**

NLAA One Year Membership

Free when
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TheNationalLocksmith.com

Technical forums, chat, online store, plus
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WEB REVIEW

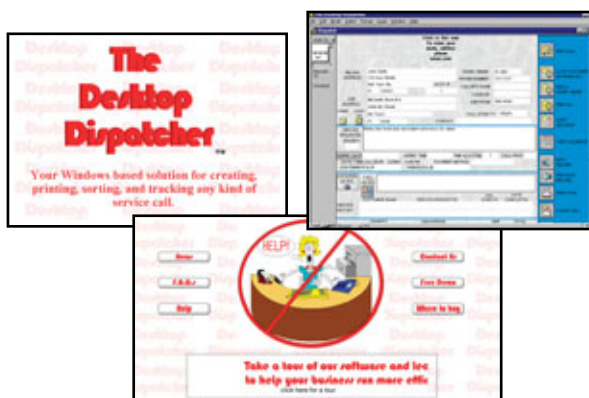
The Desktop Dispatcher

www.desktopdispatcher.com

For those interested in an easy to use, low cost, windows based, solution for creating, printing, storing and tracking any kind of service call, appointment or customer list, this site is full of information about The Desktop Dispatcher. The "Online tips and instruction" button is an extensive virtual how-to manual on every aspect of the program, showing every feature from installation to operation and how it works. Actual screen shots of the program support all of this so you can see exactly how things look and function.

There is a F.A.Q. section addressing common questions and the site offers a free downloadable demo.

This is not a site to go too if you want to look at pretty pictures... there aren't any. A few screen shots is about as good as it gets. But if you want a thorough overview about a product to base your purchasing decision on, this site leaves no stone unturned.

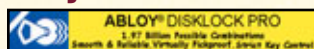


A&B Safe Corporation



www.a-bsafecorp.com

Abloy® DiskLock Pro



info@abloy.ca

Adesco Safe Manufacturing Co.



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Herbert L. Flake Co.



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HPC, Inc.



www.hpcworld.com

Indiana Cash Drawer Co.



www.icdpos.com

International Locking Devices, Ltd.



www.gatelock.com

Jet Hardware Mfg. Co.



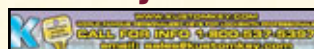
www.jetkeys.com

KSP



www.iccore.com

KustomKey



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MAG Security



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Major Manufacturing



www.majormfg.com

McDonald DASH Locksmith Supply



www.mcdonalddash.com

MDS, Inc.



www.mdsincorporated.com

Monaco Lock



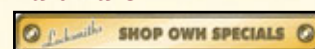
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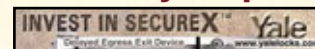
www.techtrainproductions.com

TekTone



www.tektone.net

Yale Security Group



www.yalesecurity.com

Manufacturers and distributors... join the high profile locksmith web site and you'll be featured here!
Call Jeff Adair (ext. 15) or Debbie Schertzing (ext. 16) for details. (630) 837-2044



TEST DRIVE!

We've all been there; You receive a call to replace a malfunctioning, weather beaten exterior deadbolt lock with a new one at a residence on 940 East Main St. You think to yourself "This is a quick removal and replacement job," and you're soon on the way.

You arrive at the residence with a screwdriver and the new lock in hand, and find that an old Schlage lock is being replaced. After removal you then discover that the old Schlage lock resided in a 1-1/2" mounting hole, and the new lock requires a 2-1/8" mounting hole! So much for the quick removal and replacement!

Back to your service vehicle you go to retrieve your handy-dandy installation jig, drill, hole saw, and extension cord, and back to the residence you go.

You carefully mount the installation jig and double check the backset setting to re-bore the 2-1/8" hole. Then again, being a locksmith, you're cleverer than that, aren't you? Instead of using an installation jig, you've fabricated a 1-1/2" diameter block of wood with a 2-1/8" hole drilled down the center. Now instead of dragging that bulky installation jig, you proudly break out your modified block of wood and insert it into the existing hole. You carefully position the pilot drill from the hole saw arbor in the center of the block, and use it as a guide to enlarge the hole to 2-1/8".

You're proud as a Peacock, aren't you? After a few times using your clever modified hole saw guide, the block of wood is soon mangled,

Hole Saw Alignment Guide by Tri-City Lock Company

disfigured and unusable, but it works great the first time!

This may come as a surprise, but there is an easier way, and the Hole Saw Alignment Guide is the answer.

PRODUCT:

The Hole Saw Alignment Guide is designed to re-bore an existing 1-1/2" – 2" diameter hole and turn it into a 2-1/8" diameter hole (or larger) without the use of other means. It is used in conjunction with a hole saw and is quick and easy to use. It is also ideal in situations where a drill jig may be unusable for boring purposes. We've all come across doors with decorative trim around the door, preventing the mounting of an installation jig.

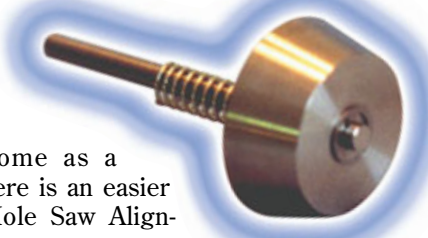
DESIGN:

The Hole Saw Alignment Guide consists of four components: 5/8" diameter spring, 1/4" guide shaft, tapered cone head and a retainer ring. It is designed to fit standard size hole saw drill arbors and fits hole saws from 2" on up.

HOW TO USE:

Using a standard quick-change 1/4" arbor and 2-1/8" hole saw with a pilot drill, first remove the existing pilot drill.

Take the spring off the Hole Saw Alignment Guide and place it in the center of the hole saw over the arbor threads. Turn the spring clockwise until it is securely fastened on the arbor threads.



Take the cone and shaft of the Hole Saw Alignment Guide and insert the shaft into the center hole of the arbor. Push down on the tapered cone until the teeth of the hole saw are even with the wider

end of the cone and tighten the setscrew to hold the Hole Saw Alignment Guide in place.

Insert the arbor shaft into the drill chuck and tighten.


You are now ready to re-bore the existing hole. Drill halfway through one side of the door, and then drill the rest of the way through the other side.

PRICE:

The Hole Saw Alignment Guide is \$68.00 plus \$7.00 shipping and handling.

CONCLUSION:

This Hole Saw Alignment Guide certainly simplifies hole enlargement. It is well designed, easy to use, and will work in almost any situation. If you have ever tried any of the other makeshift methods of enlarging an existing hole, like free-handing it, using a drill jig, or even a cleverly designed and fabricated block of wood, you will really appreciate this tool.

For more information contact: Tri-City Lock Company, 20059 Pleasant View Drive, Groveland, CA 95321. Phone: (209) 962-4692; Fax: (209) 962-4910; E-mail: simello@mlode.com. Circle 315 on Rapid Reply. 

IN SUMMARY:

DESCRIPTION: The Hole Saw Alignment Guide is designed to re-bore an existing 1-1/2" – 2" diameter hole.

PRICE: \$68.00 plus \$7.00 shipping and handling.

COMMENTS: This Hole Saw Alignment Guide certainly simplifies hole enlargement.

TEST DRIVE RESULTS: If you have ever tried any of the other makeshift methods, you will really appreciate this tool.